

# 7041 / 7042 Technical Reference Manual

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# 1. Service Call Procedures

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# 1. Service Call Procedures

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## Introduction

The Service Call Procedures section is used to identify a suspected problem. This section contains Call Flow, Initial Actions, Subsystem Maintenance, System Checks, Additional Checks, System Checkout, and Final Actions.

Initial Actions are used to gather information regarding the performance of the machine and prepare the product for servicing.

Subsystem Maintenance contains maintenance actions which may eliminate many problems through cleaning, and inspection activities.

System Checks are used to verify the normal operation of the machine. In the Y/N (Yes/No) steps of the system checks, a Yes response will lead you to the next step. A No response will indicate the next step to perform or will direct you to a Repair Analysis Procedure (RAP).

Additional Checks test various machine functions not directly tested by system checks.

RAPs will provide the instructions to isolate the faulty part or provide a list of suspect parts, when isolation is not appropriate. Wire harnesses are not included in the repair actions and problems with loose connections or damaged harnesses should be isolated using visual inspection and the wiring data in section 7.

System Checkout contains procedures used to evaluate the total operation of the system, after service has been performed.

Final Actions are used to complete the service call and to identify the actions required to clear the call with the customer.

Call Flow

The call flow diagram (Figure 1) shows the relationship of actions during a typical service call. The functions in Call Flow correspond to service manual sections as follows:

- Section 1
- Initial Actions
- Subsystem Maintenance
- System Checks / Additional Checks
- System Checkout
- Final Actions
- Section 2
- Status Indicator Repair Analysis
- Procedures (RAPs)
- Section 3
- Image Quality Repair Analysis
- Procedures (RAPs)
- Section 4
- Repair / Adjustment
- Section 5
- Parts List

All service calls start with Initial Actions and all service calls end with Final Actions.

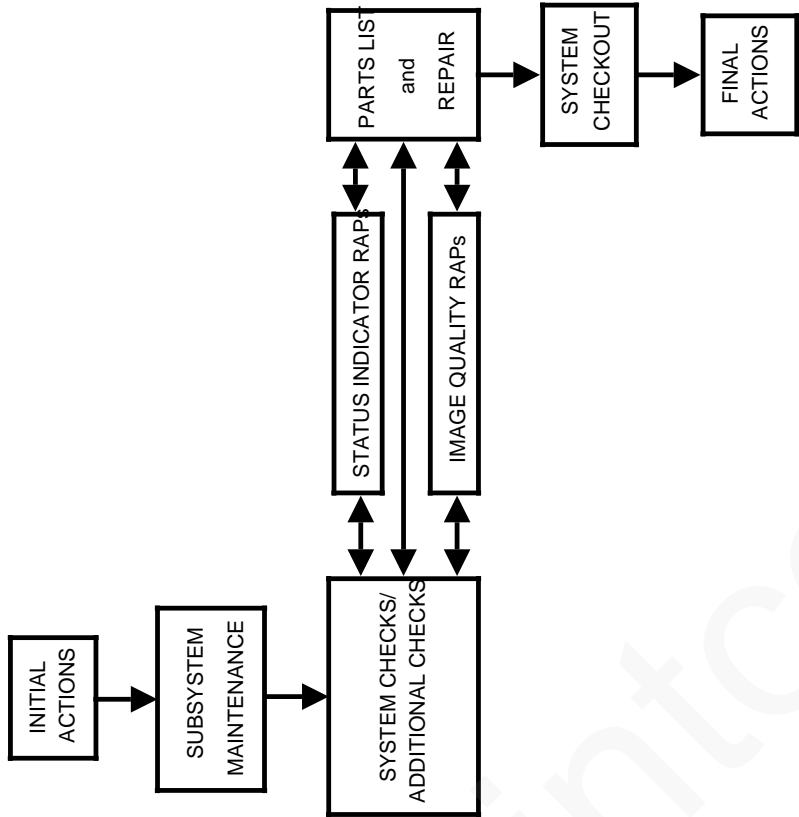


Figure 1. Call Flow Diagram

# Initial Actions

## Description

Initial Actions are used to gather information from the operator concerning problems at the local machine. Make note of symptoms, error messages, error codes or other information concerning the problem that the operator may provide. This information may help identify an intermittent or unusual problem.

## Procedure

1. Ask the operator to describe or demonstrate the problem, if possible. Obtain any information available from the machine maintenance log, if applicable.

*NOTE: The displays shown in the system checks may be different from those on the machine being tested in the following areas:*

- Time
- Date
- Terminal ID
- Telephone numbers
- Paper empty messages
- Firmware levels
- Auxiliary tray displays for paper size and availability
- CCITT operation modes

*Differences in the above items should not be interpreted as problem access points.*

2. If the problem is the result of improper operator action, refer the operator to the reference manual or the customer support center.

3. If possible, print the following reports:

- a. Activity Report
  - Press the Reports key.
  - Press the Start key.
- b. Customer Options and Service Parameters Reports
  - Press the Service key.
  - Enter 1101.
  - Press the Start key.
  - Enter 12.
- c. One Touch Directory
  - Press the Stop key.
  - Press the Reports key.
  - Press the Redial/ , 8 times.
  - Press the Start key.
- d. Speed Dial Directory
  - Press the Reports key.
  - Press the Redial/ , 7 times.
  - Press the Start key.
- e. A Group Dial Directory
  - Press the Reports key.
  - Press the Redial/ , 5 times.
  - Press the Start key.

4. If less than M100% is displayed, verify with the customer any requirement of printing the documents in memory before switching off the power or before clearing the memory.

5. Switch off the power.

6. Install the service drum counter.

7. Activity Report indicates the machine has more than 90,000 print operations since the last scheduled maintenance was performed. Total print count is located on the report under the following titles.

- 7041 W/O Tag 42: TOTAL COPY PAGES
- 7042 & 7041 W/ Tag 42: TOTAL PRINT PAGES

**Y N**

| Go to step 10.

8. The customer has a scheduled maintenance kit available.

**Y N**

| Inform the customer of the need to acquire a scheduled maintenance kit and have scheduled maintenance performed. Go to step 13.

9. Go to scheduled maintenance in section 6 of this manual.

10. Switch on the power. While machine is warming up, MAINTENANCE is displayed.

**Y N**

| Go to step 13.

11. The customer has a scheduled maintenance kit available.

**Y N**

| Inform the customer of the need to acquire a scheduled maintenance kit and have scheduled maintenance performed. Go to step 13.

12. Go to scheduled maintenance in section 6 of this manual.

13. Perform Subsystem Maintenance.

## Subsystem Maintenance

### Description

The RAPs in this manual are based on the assumption that the subsystem maintenance procedures have been completed at the beginning of each call. Each item must be inspected and cleaned if necessary.

A subsystem maintenance check list and a detailed subsystem maintenance procedure are included. Note the reference to the procedure step numbers in the check list.

*NOTE: You may want to place a drop cloth under the machine to protect the area during this procedure.*

### Subsystem maintenance check list

Inspect or clean the scanner document path components. (Ref. step 1)

- ADF roller assembly
- feed and exit rollers
- retard pad
- exit roller and idler assemblies
- platen glass

Inspect or clean the printer paper path components. (Ref. step 3)

- paper feed roller and friction pad
- rubber and metal pinch rollers
- corotron assembly rubber roller
- lower and upper exit rollers
- right paper guide
- lower paper guide

Inspect or clean the developer assembly. (Ref. step 4)

- metering blade
- mylar strip at the developer base
- contacts on the right side and front of the developer assembly
- ends of the magnetic roller

Inspect or clean the printer area voltage contacts. (Ref. step 5)

- front HV connector contacts
- rear HV connector contacts
- contacts on the right frame
- contacts on the laser

Inspect or clean the drum module. (Ref. step 6)

- contacts on the top and rear of the drum module
- ends of the drum
- charge corotron

Inspect or clean the corotron assembly. (Ref. step 7)

- transfer corotron
- detack corotron

Other items. (Ref. steps 8 through 10)

- Inspect or clean the laser window.
- Inspect the fuser cleaning pad and replace if required.
- Inspect or clean the rollers in the auxiliary tray, if applicable.

## Subsystem maintenance procedure

1. Clean the scanner document path.

### WARNING

**Use care to prevent the rollers from pinching a finger or the cleaning materials.**

- a. Open the control panel assembly and actuate the scanner interlock with a non-metallic item. Begin a scan motor/ADF test (05), test method 1, and inspect or clean with a clean-up or alcohol the following rollers:
  - ADF roller,
  - feed roller,
  - exit roller.
  - pre-feed roller (7042 & 7041 W/ Tag 42)

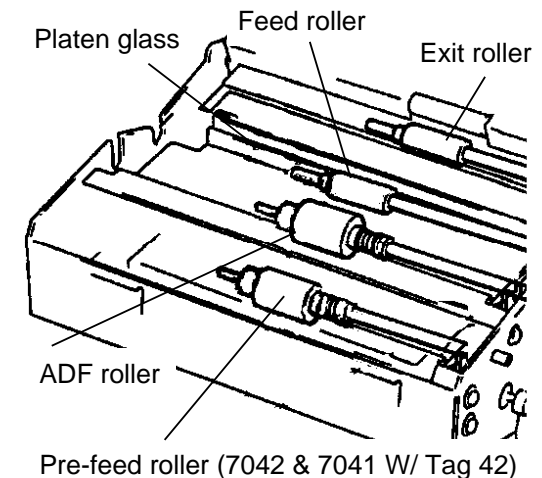


Figure 1. Scanner Area

- b. Switch off the power and disconnect the power cord.
- c. If required, use the lens and mirror cleaner to clean the platen glass (Figure 1).

- d. Inspect or clean using a clean-up or alcohol the following:
  - retard pad (Figure 2).
  - feed and exit roller idlers (Figure 3).

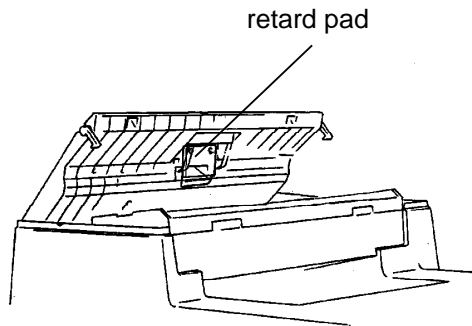


Figure 2. Retard Pad

**NOTE:** The control panel assembly is removed to show the idler rollers.

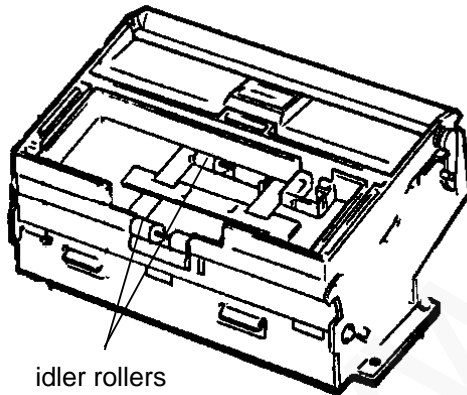


Figure 3. Scanner Idler Rollers

2. Remove the drum module and developer assembly. Protect the drum from excessive light.

### CAUTION

*Avoid touching the drum or the magnetic roller surfaces.*

3. Inspect or clean the printer paper path.
  - a. Inspect or clean the following items using a clean up or alcohol:
    - paper feed roller (Figure 4),
    - feed roller friction pad (Figure 4),
    - rubber pinch roller (Figure 4),
    - metal pinch roller (Figure 4),
    - corotron rubber roller (Figure 4),
    - the lower exit rollers (Figure 5), and
    - upper exit rollers (Figure 5), (Clean the upper exit rollers only if a problem is suspected or that area is disassembled during the call.)

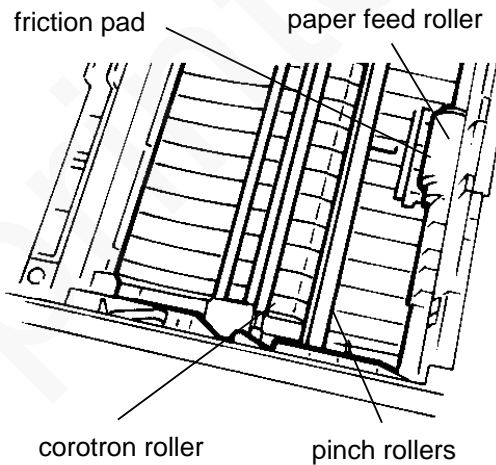


Figure 4. Printer Area

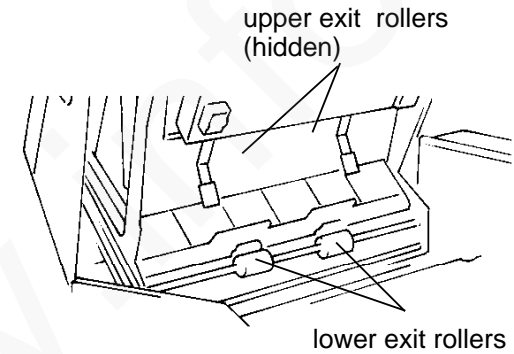


Figure 5. Printer Exit Rollers

- b. Inspect or clean the right and the lower paper guides with a soft cloth and a general purpose cleaning solution (Figure 6).

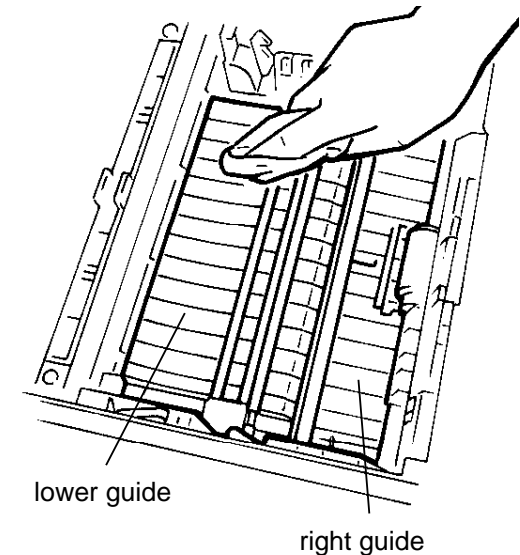


Figure 6. Printer Paper Guides

4. Inspect or clean the developer assembly.
  - a. Inspect or clean the metering blade using the mylar scraper (Figure 7).

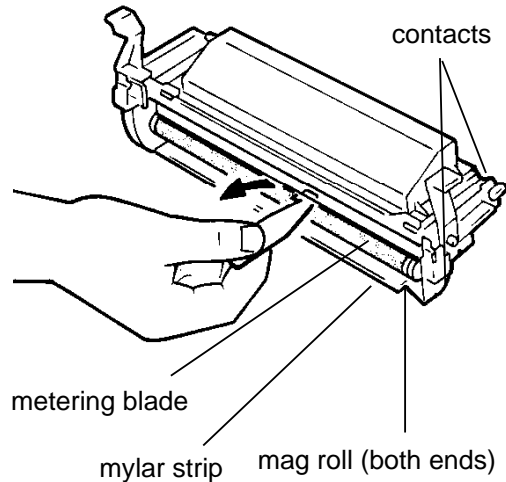


Figure 7. Developer Assembly

- b. Inspect or clean the mylar strip at the base of the developer assembly using a cotton swab (Figure 7).
  - c. Inspect or clean the contacts on the right side and the front of the developer assembly using a cotton swab (Figure 7).
  - d. Inspect or clean the bare metal ends of the magnetic roller with a cotton swab. Using your thumb, rotate the belt pulley on the rear of the developer assembly so that the magnetic roller turns in a downward direction and the stripes of toner move in an upward direction (Figure 7).

5. Inspect or clean the printer area voltage contacts.

- a. Inspect or clean the contacts on the front HV connector using a cotton swab (Figure 8).

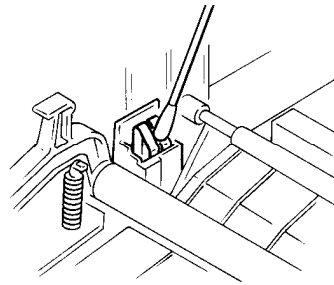


Figure 8. Front HV Connector

- b. Inspect or clean the contacts on the rear HV connector using a cotton swab (Figure 9).

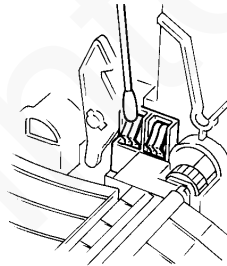


Figure 9. Rear HV Connector

- c. Inspect or clean the contacts (toner motor and sensor) on the right frame with a cotton swab (Figure 10).

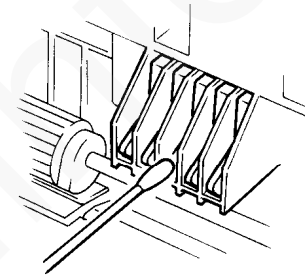


Figure 10. Right Frame HV Connectors

- d. Inspect or clean the contacts on the bottom of the laser assembly with a cotton swab (Figure 11).

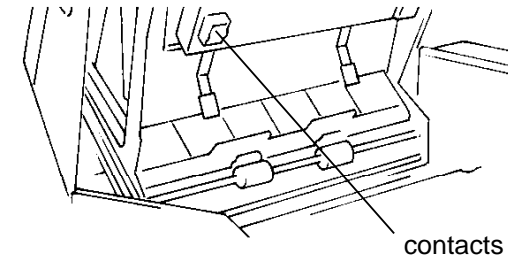


Figure 11. Laser Contacts



6. Inspect or clean the drum module.
  - a. Inspect or clean the contacts on the top and rear of the drum module using a cotton swab (Figure 12).
  - b. Inspect or clean the bare metal ends of the drum using a cotton swab (Figure 12).

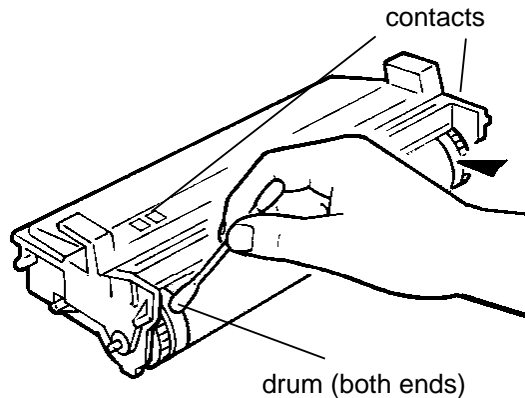


Figure 12. Drum Module

- c. Inspect or clean the charge scorotron using the charger cleaner (Figure 13).

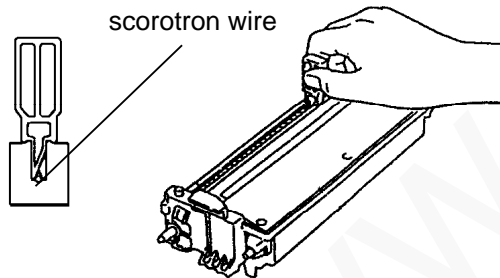


Figure 13. Charge Scorotron

7. Inspect or clean the corotron assembly.
  - a. Inspect or clean the transfer corotron using a cotton swab (Figure 14).
  - b. Inspect or clean the detack corotron using a cotton swab (Figure 14).

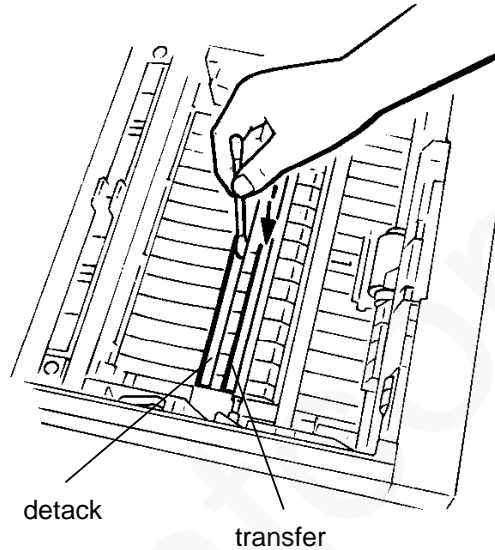


Figure 14. Transfer and Detack Corotron

8. Inspect or clean the laser window using a lint free cloth (Figure 15).
9. Inspect the fuser cleaning pad and replace if it is excessively dirty.
10. With an auxiliary tray, remove the paper cassette and inspect or clean the auxiliary tray rollers using a clean-up or alcohol (Figure 16).
11. Reassemble the machine.
12. Connect the power and telephone cords.
13. Go to System Checks.

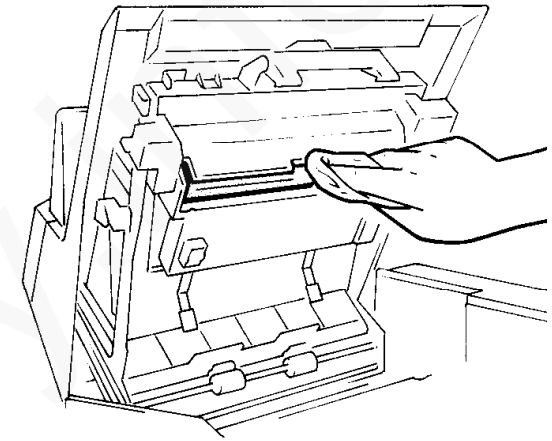


Figure 15. Laser Window

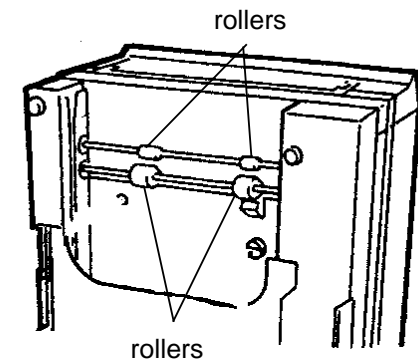


Figure 16. Auxiliary Tray Rollers

## 7041 W/O Tag 42

### System Checks

#### Initial conditions

Inspect for the following conditions:

- Ensure that the telephone/data cables are not loose or connected wrong at the machine jacks or wall jack.
- Ensure that the power cord is connected to the machine and to the wall outlet.
- Ensure that the handset, if equipped, is on the handset cradle.
- No documents are loaded in the ADF.
- The covers are latched.
- Consumables are loaded correctly (Both cassettes, if an auxiliary tray is installed).
- Listen to ring is selected in options.

**NOTE:** If an error code or message appears at any time during the System Checks, do not continue. Refer to section 2, tables 1-4, for the error code or message and perform the procedures indicated.

#### Off-Line System Checks

1. Switch off the power, wait 10 seconds, then switch the power on.
  - a. A single “beep” is heard from the speaker.
2. The following display appears within 2 seconds.

WARMING UP

**Y N**  
| Perform RAP 21.

3. Both fans operate.

**Y N**  
| Perform RAP 24.

4. Only the Standard or Fine LED lights. (All other LEDs on the control panel assembly are not lit.)

**Y N**  
| Perform RAP 22.

5. The print motor cycles the drive system for 7 to 10 seconds.

**NOTE:** If unsure that the printer cycled, open the top cover, cheat the interlock, and check that the magnetic roller and/or drum turns.

**Y N**  
| Perform RAP 30.

6. The following display, with the colon flashing, appears within 60 seconds:

MAR-17 12:35P  
M100%  
LOAD

**Y N**  
| Perform RAP 25.

7. Open the control panel assembly. The display indicates:

CLOSE COVER

**Y N**  
| Perform RAP 26.

8. Close the control panel assembly. The display indicates:

MAR-17 12:35P  
M100%  
LOAD

**Y N**  
| Perform RAP 25.

9. Open the top cover. The display indicates:

CLOSE COVER

**Y N**  
| Perform RAP 26.

10. Close the top cover. After the printer cycles, the display indicates:

MAR-17 12:35P  
M100%  
LOAD

**Y N**  
| Perform RAP 25.

11. Enter the Service Mode.
  - a. Open the Access Panel.
  - b. Press the Service key.
  - c. A “Beep” is heard from the speaker.
  - d. The display indicates:

ENTER CODE  
CODE=

**Y N**  
| Perform RAP 23.

12. Close the Access Panel and enter “1101”.
  - a. “Beeps” are heard from the speaker.
  - b. The entered digits are displayed.
  - c. Press the Start key.
  - d. The display then indicates:

TEST MODE  
TEST  
No. = --

**Y N**  
| Perform RAP 23.

13. Perform a Printer Test.
- Enter "00".
  - "Beeps" are heard from the speaker.
  - The entered digits are displayed.
  - The display then indicates:

PRINTER TEST

No. = -

**Y N**

| Perform RAP 23.

14. Enter a "1".

15. In approximately 30 seconds, the display returns the following:

TEST MODE  
TEST

No. = - -

the print motor runs, and the feed solenoid energizes.

**Y N**

| Perform RAP 31.

16. The print motor initiates paper feed and sounds normal.

**Y N**

| Perform RAP 33.

17. A sheet of paper is fed out of the machine onto the top cover.

**Y N**

| Perform RAP 31.

18. Image quality of the test pattern is acceptable. (Reference section 3, for examples of image quality.)

**Y N**

| Perform IQ RAP 1.

19. Perform a Printer ROM/RAM test.
- Enter "02".
  - "Beeps" are heard from the speaker.
  - The entered digits are displayed.
  - The display then indicates:

PRINTER  
ROM/RAM

**Y N**

| Perform RAP 23.

20. Within 90 seconds, the display indicates:

PRINTER  
ROM/RAM  
OK

**Y N**

| Go to System Errors in section 2.

21. Press the Stop key.
- A "Beep" is heard from the speaker.
  - The display then indicates:

TEST MODE  
TEST

No. = - - -

**Y N**

| Perform RAP 23.

22. Perform a FAX ROM/RAM test.

- Enter "10".
- "Beeps" are heard from the speaker.
- The entered digits are displayed.
- The display then indicates:

FAX ROM/RAM

**Y N**

| Perform RAP 25.

23. Within 15 seconds, the display indicates (firmware level):

OK  
B1USXCOOAF

**Y N**

| Replace the main PWB (REP 5.1).

24. Perform an Image Memory test.

- Press the Stop key.
- Enter "16".
- "Beeps" are heard from the speaker.
- The entered digits are displayed.
- The display then indicates:

MEMORY TEST

**Y N**

| Perform RAP 25.

25. Within 5 seconds, the display indicates:

MEMORY TEST  
OK

**Y N**

| Go to System Errors in section 2.

26. Press the Stop key twice.

- "Beeps" are heard from the speaker.
- The display then indicates:

MAR-17 12:37P  
M100%  
LOAD

**Y N**

| Perform RAP 25.

27. Insert a document into the ADF. The display then indicates:

MAR-17 12:37P  
M100%  
DIAL OR

**Y N**

| Perform RAP 40.

28. Perform a Copy operation.
  - a. Press the Copy key.
  - b. A "Beep" is heard from the speaker.
  - c. The display then indicates:

COPY

**Y N**  
| Perform RAP 23.

29. The scan motor initiates document feed and sounds normal.

**Y N**  
| Perform RAP 41.

30. The display then indicates:

COPY  
No. OF  
DOC.=01

and the document feeds out of the scanner.

**Y N**  
| Perform RAP 40.

31. The print motor runs.

**Y N**  
| Perform RAP 33.

32. The feed solenoid energizes.

**Y N**  
| Perform RAP 31.

33. A sheet of paper feeds into the machine and a copy is fed onto the top cover.

**Y N**  
| Perform RAP 31.

34. The display then indicates:

MAR-17 12:38P  
M100%  
LOAD

**Y N**  
| Perform RAP 25.

35. Image quality of the recorded document is acceptable. (Reference section 3, for examples of image quality.)

**Y N**  
| Perform IQ RAP 1.

36. Press the (one-touch) OT:18 key.

a. The display indicates a phone number or OT:18 NO ENTRY.

**Y N**  
| Perform RAP 23.

37. Press the Stop key.

38. Perform On-Line System Checks.

## On-Line System Checks

*NOTE: Perform these checks only after the Off-Line System Checks have been performed.*

1. Perform a send operation.

*NOTE: Use a G3 facsimile machine that is known to be functioning properly.*

- a. Load a document into the ADF.
- b. Press the Tel key.
- c. The Tel LED lights.

**Y N**  
| Perform RAP 23.

2. Dial tone is heard.

**Y N**  
| Perform RAP 50.

3. The control panel display is as follows:

DIAL

**Y N**  
| Perform RAP 25.

4. Enter the numbers to be dialed. Do not press the Start key. The display returns the following:

DIALING  
TEL:2051

**Y N**  
| Perform RAP 23.

5. The remote machine answers and the display indicates:

CONNECTING

**Y N**  
| Perform RAP 51.

6. The document feeds into the scanner and then stops.

**Y N**  
| Perform RAP 40.

7. The remainder of the document is scanned and the display indicates:

SENDING G3 P01  
ID:2001

**NOTE:** P01, in the display above, appears slightly later than the rest of the display.

Y N  
| Perform RAP 54.

8. After completion of the send operation, the display briefly indicates:

MAR-17 12:39P M100%  
COMPLETED

a "BEEP" is heard from the speaker and then the display changes to:

MAR-17 12:39P M100%  
LOAD ORIGINALS

Y N  
| Perform RAP 25.

9. The image quality at the remote machine is acceptable. (Image quality acceptance is determined by the remote operator).

Y N  
| Perform IQ RAP 1.

10. Call the machine from another telephone.

- A ringing sound is produced.
- The Tel LED lights.
- A ready tone is produced.
- Stop the call, hang up the phone.
- The following is displayed for approximately 30 seconds:

CONNECTING

then returns the following:

MAR-17 12:40P M100%  
LOAD ORIGINALS

Y N  
| Perform RAP 53.

11. Perform a receive operation.

**NOTE:** Have a remote machine operator send a document to this machine in the G3 mode.

- A ringing sound is produced.
- The Tel LED lights.
- The display indicates:

CONNECTING

Y N  
| Perform RAP 53.

12. During reception the display changes to:

RECEIVING G3 P01  
ID:2001

**NOTE:** P01, in the display above, appears slightly later than the rest of the display.

Y N  
| Perform RAP 54.

13. After completion of the receive operation, the display briefly indicates:

MAR-17 12:41P M100%  
COMPLETED

a "BEEP" is heard from the speaker and then the display changes to:

MAR-17 12:41P M100%  
LOAD ORIGINALS

Y N  
| Perform RAP 25.

14. The image quality is acceptable. (Reference section 3, for examples of image quality).

Y N  
| Perform IQ RAP 1.

15. Lift the handset from the cradle.

- The following is displayed:

OFF-HOOK

Y N  
| Perform RAP 52.

- Dial tone is heard.

Y N  
| Perform RAP 52.

16. The customer problem has been resolved.

Y N  
| Go to Additional Checks or repeat the System Checks procedures.

17. Go to System Checkout.

## 7042 & 7041 W/ Tag 42

### System Checks

#### Initial conditions

Inspect for the following conditions:

- Ensure that the telephone/data cables are not loose or connected wrong at the machine jacks or wall jack.
- Ensure that the power cord is connected to the machine and to the wall outlet.
- Ensure that the handset, if equipped, is on the handset cradle.
- No documents are loaded in the ADF.
- The covers are latched.
- Consumables are loaded correctly (Both cassettes, if an auxiliary tray is installed).
- Listen to ring is selected in options.

**NOTE:** If an error code or message, with or without an error LED appears at any time during the System Checks, do not continue. Refer to section 2, tables 1-4, for the error code or message and perform the procedures indicated.

#### Off-Line System Checks

1. Switch off the power, wait 10 seconds, then switch the power on.
  - a. A single "beep" is heard from the speaker.
2. The following display appears within 2 seconds.

WARMING UP

Y N  
| Perform RAP 21.

3. The fan is operating.  
Y N  
| Perform RAP 63.

**NOTE:** If the error LED lights before step 4, wait until after step 5 is completed before determining fault. Refer to section 2, tables 1-4, for the error code or message displayed.

4. Only the Standard or Fine LED lights. (All other LEDs on the control panel assembly are not lit.)  
Y N  
| Perform RAP 22.
5. The print motor cycles the drive system for 7 to 10 seconds.

**NOTE:** If unsure that the printer cycled, open the top cover, cheat the interlock, and check that the magnetic roller and/or drum turns.

Y N  
| Perform RAP 30.

6. The following display, with the colon flashing, appears within 60 seconds:

MAR-17 12:35P  
M100%  
LOAD

Y N  
| Perform RAP 25.

7. Open the control panel assembly. The display indicates:

CLOSE COVER

Y N  
| Perform RAP 26.

8. Error LED begins to flash.

Y N  
| Perform RAP 22.

9. Close the control panel assembly. The display indicates:

MAR-17 12:35P  
M100%  
LOAD

Y N  
| Perform RAP 25.

10. Open the top cover. The display indicates:

CLOSE COVER

Y N  
| Perform RAP 26.

11. Close the top cover. After the printer cycles, the display indicates:

MAR-17 12:35P  
M100%  
LOAD

Y N  
| Perform RAP 25.

12. Enter the Service Mode.
  - a. Open the Access Panel.
  - b. Press the Service key.
  - c. A "Beep" is heard from the speaker.
  - d. The display indicates:

ENTER CODE  
CODE=\_

Y N  
| Perform RAP 23.

13. Close the Access Panel and enter "1101".
- "Beeps" are heard from the speaker.
  - The entered digits are displayed.
  - Press the Start key.
  - The display then indicates:

TEST MODE  
TEST

No. ---

Y N

| Perform RAP 23.

14. Perform a Printer Test.
- Enter "00".
  - "Beeps" are heard from the speaker.
  - The entered digits are displayed.
  - The display then indicates:

PRINTER TEST

No. --

Y N

| Perform RAP 23.

15. Enter a "1".

16. In approximately 30 seconds, the display returns the following:

TEST MODE  
TEST

No. ---

the print motor runs, and the feed solenoid energizes.

Y N

| Perform RAP 31.

17. The print motor initiates paper feed and sounds normal.

Y N

| Perform RAP 33.

18. A sheet of paper is fed out of the machine onto the top cover.

Y N

| Perform RAP 31.

19. Image quality of the test pattern is acceptable. (Reference section 3, for examples of image quality.)

Y N

| Perform IQ RAP 1.

20. Perform a Printer ROM/RAM test.

- Enter "02".
- "Beeps" are heard from the speaker.
- The entered digits are displayed.
- The display then indicates:

PRINTER  
ROM/RAM

Y N

| Perform RAP 23.

21. Within 2 minutes, the display indicates:

PRINTER  
ROM/RAM

OK

Y N

| Go to System Errors in section 2.

22. Press the Stop key.

- A "Beep" is heard from the speaker.
- The display then indicates:

TEST MODE  
TEST

No. ---

Y N

| Perform RAP 23.

23. Perform a FAX ROM/RAM test.

- Enter "10".
- "Beeps" are heard from the speaker.
- The entered digits are displayed.
- The display then indicates:

FAX ROM/RAM

Y N

| Perform RAP 25.

24. Within 15 seconds, the display indicates (firmware level):

OK  
BLUSXCOOAF

Y N

| Replace the main PWB (REP 5.1).

25. Perform an Image Memory test.

- Press the Stop key.
- Enter "16".
- "Beeps" are heard from the speaker.
- The entered digits are displayed.
- The display then indicates:

MEMORY TEST

Y N

| Perform RAP 25.

26. Within 5 minutes, the display indicates:

MEMORY TEST  
OK

Y N

| Go to System Errors in section 2.



27. Press the Stop key twice.  
 a. "Beeps" are heard from the speaker.  
 b. The display then indicates:

```

MAR-17 12:37P
M100%
LOAD
  
```

**Y N**  
 | Perform RAP 25.

28. Insert a document into the ADF. Document feeds into scanner approximately 2 inches and stops. The display then indicates:

```

MAR-17 12:37P
M100%
DIAL OR
  
```

**Y N**  
 | Perform RAP 40.

29. Perform a Copy operation.  
 a. Press the Copy key.  
 b. A "Beep" is heard from the speaker.  
 c. The display then indicates:

```

COPY
COPY
No:001
  
```

**Y N**  
 | Perform RAP 23.

30. The scan motor initiates document feed and sounds normal.  
**Y N**  
 | Perform RAP 41.

31. The document feeds out of the scanner.  
**Y N**  
 | Perform RAP 40.

32. The print motor runs.  
**Y N**  
 | Perform RAP 33.

33. The feed solenoid energizes.  
**Y N**  
 | Perform RAP 31.

34. A sheet of paper feeds into the machine and a copy is fed onto the top cover.  
**Y N**  
 | Perform RAP 31.

35. The display then indicates:

```

MAR-17 12:38P
M100%
LOAD
  
```

**Y N**  
 | Perform RAP 25.

36. Image quality of the recorded document is acceptable. (Reference section 3, for examples of image quality.)  
**Y N**  
 | Perform IQ RAP 1.

37. Load a document into the ADF.  
 a. Press the (one-touch) OT:18 key.  
 b. The display indicates a phone number or OT:18 NO ENTRY.

**Y N**  
 | Perform RAP 23.

38. Press the Stop key.

39. Perform On-Line System Checks.

## On-Line System Checks

*NOTE: Perform these checks only after the Off-Line System Checks have been performed.*

1. Perform a send operation.

*NOTE: Use a G3 facsimile machine that is known to be functioning properly.*

- a. Load a document into the ADF.
  - b. Enter the telephone number.
  - c. Press [Start].
  - d. Document is scanned
2. Busy LED flashes and the document is transmitted correctly.

**Y N**  
 | Perform RAP 55.

3. The image quality at the remote machine is acceptable. (Image quality acceptance is determined by the remote operator).

**Y N**  
 | Perform IQ RAP 1.

4. Perform a receive operation.

*NOTE: Have a remote machine operator send a document to this machine in the G3 mode.*

- a. A ringing sound is produced.
- b. The busy LED begins to flash.
- c. Document is received correctly.

**Y N**  
 | Perform RAP 56.

5. The image quality is acceptable. (Reference section 3, for examples of image quality).

**Y N**  
 | Perform IQ RAP 1.



6. Lift the handset from the cradle.  
a. Dial tone is heard and the following message is displayed:

OFF-HOOK

- Y N  
| Perform RAP 52.
7. The customer problem has been resolved.  
Y N  
| Go to Additional Checks or repeat the System Checks procedures.
8. Go to System Checkout.

## Additional Checks

### Description

This section is used to stress different areas of the machine to identify specific problems which did not occur during system checks. Many times the decision will have to be based on the customers explanation of the problem.

*NOTE: Always complete the off-line and on-line system checks before using these procedures.*

### Procedure

1. The problem description is included in table 1.  
**Y N**  
| Go to table 2 under Service Tests and perform any of the service tests which seem related to the problem.
2. Perform the action listed under the procedure column in table 1.

Table 1. Problem Descriptions

Problem Description	Procedure
ADF feeding problems.	Go to step 3.
Paper empty not being indicated.	Go to step 4.
Paper feed problems from one of the cassettes only, when the auxiliary tray is installed.	Go to step 8.
Specific control panel keys bad.	Go to step 9.
Error or communication codes.	Go to step 10.
Intermittent failures.	Go to step 11.
Loses the time and date.	Replace the main PWB (REP 5.1).
Will not reduce a document, copy mode.	Go to RAP 40.
(7042 & 7041 W/ Tag 42) Dual access problems .	Replace the main PWB (REP 5.1).

3. Stress the machine, to produce the problem, by using the ADF test method of the scanner drive test 05 (See table 2).
4. Single cassette machines display ADD PAPER when the cassette is removed.  
**Y N**  
| Go to RAP 32.
5. Machines with the auxiliary tray option display NONE next to the 1st: or 2nd: indicators in the display when the cassettes are removed (one at a time).  
**Y N**  
| Go to step 7.
6. Remove all the paper except for one sheet in each cassette and run the machine in the copy mode to stress the reported failure condition.
7. Go to RAP 62, Auxiliary tray option.
8. Remove the cassette which is not having the problem and return to system checks.

*NOTE: Some displays, for example all the displays which indicate LOAD ORIGINALS, will be changed from those indicated in system checks with one cassette removed.*

9. Perform the control panel key test 03 (See table 2).
10. Go to the appropriate table at the beginning of section 2.
11. For intermittent problems go to RAP 13 or repeat the procedure which produces the problem, as reported by the customer.

## Service Tests

The machine has additional tests built into the system firmware to help in the diagnosis of problems. These tests are accessed by pressing the [Service] key and an additional four digit code. The complete procedure for each test is located in section 6 of this manual.

### Code 0618

Handshaking signals (protocol monitor) during a communication operation can be displayed by pressing the [Service] key and entering the code 0618. The protocol monitor must be turned off using the same procedure after the tests are complete.

### Code 1101

Table 2 lists the tests accessed by pressing the Service key and entering the code 1101. The desired test is then selected by entering the test number (No.).

Table 2. Tests accessed by code 1101

Test	Test No.
Printer Test	00
Modem Transmit Test	01
Printer ROM/RAM Test	02
Control Panel Key Test	03
Sensor/Interlock Test	04
Scan Motor/ADF Test	05
LED Test	06
PIX ROM/RAM Test (7042 & 7041 W/ Tag 42)	07
FAX ROM/RAM Test	10
DTMF Transmit Test	11
Print Options Report	12
RAM Initialization	13
Dialing Test	15
Image Memory Test	16

## System Checkout

### Procedure

1. Perform a copy operation.
  - a. Load a document in the ADF.
  - b. Press the copy key.
2. Perform a send operation.
  - a. Load a document in the ADF.
  - b. Dial the remote machine.
3. Perform a receive operation.
  - a. Have the remote machine operator dial this machine and send a test document.
4. All of the above operations were completed without errors and the copy quality was acceptable.  
**Y N**  
**|** Go to System Checks.
5. Go to Final Actions.

## Final Actions

### Procedure

1. Refer to the reports printed during initial actions and ensure that all the customer options and the service parameters, that were changed during the call, are set back to their original condition.

*NOTE: Do not change options or parameters back to their original state if required to repair a problem.*

2. Install the customer drum counter.
3. Update the tag matrix and maintenance log, as required.
4. Reinstall and clean all the covers removed during the service call.
5. Clean the general area.
6. Provide the dial lists to the customer if any dial directory information was lost.
7. Complete all required administrative tasks.

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## 2. Status Indicator Repair Analysis Procedures

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### Introduction

The Repair Analysis Procedures section is used to isolate an identified problem to a faulty component or subassembly. It contains this Introduction, an Activity Report Information table, error information tables, and the Repair Analysis Procedures (RAPs).

The various tables include all operator messages indicated in the display along with their meaning. The tables will also list the Transmit and Receive error codes and associated messages. All error codes will be logged in the Activity Report.

Use the Display Error Messages, Display System Error Codes, and Communication Error Codes tables when error messages are displayed or error codes are printed in the Activity Report.

The Repair Analysis Procedures (RAPs) are entered from Section 1, system checks. There are two types of RAPs: Status Indicator (SI) RAPs, contained in this section, and Image Quality (IQ) RAPs, located in Section 3.

RAPs will normally isolate a problem to a specific component or subassembly, excluding the wire harnesses.

In the Y/N (Yes/No) steps of the RAPs, a Yes response will lead you to the next step. A No response will indicate a corrective action, or will direct you to another step. When the indicated corrective action has been completed, go to Section 1 and restart the System Check to verify that the problem has been corrected.

### Test Points / Voltage Tolerances

Machine grounds, power and signal, are connected to the frame ground. Due to this condition all circuit troubleshooting can be performed using the machine chassis as the grounding point. If more information is needed to locate connectors or test points, refer to section 7 of this manual.

Unless specified otherwise, the following voltage tolerances are used within this section:

<u>Stated</u>	<u>Measured</u>
+ 5.0 VDC	+ 3.8 VDC to 5.5 VDC
+ 24.0 VDC	+ 23.0 VDC to + 25.5 VDC
0.0 VDC	+ 0.5 VDC

## Activity Report Information

Table 1. Activity report information

Information	Mode	Description
OK	All	Normal end of transaction.
STOP	All	Communication was stopped by pressing the Stop button.
CALL	Receive	T1 timer timed out while waiting for a response from the transmitter.
OKVC	All G3	Normal end of transaction with the operator responding to a voice request.
OKVR	All G3	Normal end of transaction, except the operator did not respond to a voice request. Operation completed with a printed message.
ND	Transmit	No document was available for transmission.
PE	G3 Polling	The machine did not have recording paper during a polling request.

*NOTE: This information is printed in the Activity Report for each transaction.*

## Display Error Messages

Table 2. Display error messages

Display messages	Description	Procedures
DOCUMENT JAM	A document has jammed in the scanner area or an ADF misfeed has occurred.	Open the control panel assembly and remove the jammed document. If the problem repeats, go to RAP 40.
ADD PAPER	Recording paper has been depleted.	Add paper to the paper cassette or cassettes. If the machine still indicates to add paper, go to RAP 32.
PAPER JAM	The recording paper is jammed in the printer area.	Open the printer and remove the jammed recording paper. If the problem repeats, go to RAP 31.
CLOSE COVER	The control panel assembly or top cover is open.	Close the control panel assembly and top cover. If the display still indicates to close the cover, go to RAP 26.
COMM. FAIL nnn	A communication error occurred during the machine operation.	Refer to communication error codes (Table 4) for more details.
MEMORY FULL	Internal image memory is full.	Print out documents stored in memory. Sort the documents into small batches. Repeat the operation.
FILE FULL	Memory has reached capacity, 32 files.	Print or delete unnecessary files.
NO DRUM UNIT	The drum is not installed.	Reinstall the drum. If the display still indicates there is no drum unit, go to RAP 35.
DRUM NEAR END	The drum is within 100 operations of end of life.	Order a replacement drum.
CHANGE DRUM UNIT	The drum must be replaced.	Replace the drum.
TONER EMPTY	The developer assembly is out of toner.	Replace the toner on the developer assembly. If the toner is not empty, go to RAP 36.
NO COUNTER	The counter is not installed.	Install the counter. If the counter is installed, go to RAP 37.
OFF-HOOK	The handset is not properly seated in the cradle.	Place the handset into the cradle. If the handset is seated in the cradle properly, go to RAP 52.
WARMING UP	The machine is warming up to operating temperature.	Wait for the machine to reach normal operating temperature. If the machine continues to indicate that it is warming up, go to RAP 25.
SYSTEM ERROR nnnn	An internal error has occurred.	Refer to display system errors (Table 3) for more details.
MAINTENANCE	Machine counter has reached 100,000 count since scheduled maintenance was performed.	Customer must order a kit for scheduled maintenance. Refer to scheduled maintenance in section 6 of this manual.

*NOTE: These messages are shown in the display only.*



## Display System Error Codes

Table 3. Display system error codes

Error codes	Description	Procedures
MROM	System ROM checksum error.	Replace the main PWB (REP 5.1).
MRAM	RAM read/write check error.	Replace the main PWB (REP 5.1).
MAnn	Image memory address bus check error. (nn) indicates a bad bus number (00 to 08).	Replace the main PWB (REP 5.1).
MDnn	Image memory read/write check error. (nn) indicates a bad segment number.	MD00 through MD03, replace the main PWB (REP 5.1). MD04 and above, go to RAP 61.
LB10	Memory error.	Replace the driver PWB (REP 5.5).
LB11	Laser error.	Go to RAP 34.
LB12	Fuser error.	Go to RAP 38.
LB13	A fan error.	7041 W/O Tag 42 - Go to RAP 24. 7042 & 7041 W/ Tag 42 - Go to RAP 63.
LB14	High voltage error.	Go to RAP 14
LB15 LB16 LB17 LB18 LBnn	Internal data error. A command error. Illegal command error. A setting error. All other unlisted LB codes.	Replace the following items in the order listed: - Main PWB (REP 5.1) - Driver PWB (REP 5.5) - Setup PWB (REP 5.6)
LB19	Processor status error.	Go to RAP 19

*NOTE: When these errors are encountered, switch off the power and wait 1 minute. Switch on the power. If the problem persists, follow the procedures given above. These error codes are shown in the display only.*

## Communication Error Codes

Table 4. Display and activity report communication error codes

Error codes	Description	Procedures
001	Operation was stopped by opening the cover.	Close all covers and check the scanner and top cover interlock switches for marginal or intermittent operation. If the problem repeats, go to RAP 26.
002	Document jammed or was too long.	Remove jam and check for proper operation by performing a scanner drive test (05), ADF test method. If the problem continues, go to RAP 40.
003	Out of recording paper or jammed and memory was full.	Load paper, remove jam and check for proper operation by performing a printer test (00). If the problem repeats, go to RAP 31.
005	Modem hardware or timing error.	A mechanical error. Perform System Checks.
006	Hardware or timing error.	A mechanical error. Perform System Checks.
008	T1 timeout error. The two machines were trying to identify each other for greater than 35 seconds or busy tone was detected.	A transmit or receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
009	Final attempt to redial was not successful.	Check the remote machine. Test the dialing functions.
010	T1 timer (35 seconds) timed out while waiting for a response from the transmitter.	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
014	An error has occurred in the laser printer or the scanner.	A mechanical error. Perform System Checks.
015	Drum and drum counter should be replaced or toner is empty.	Check drum and drum counter for proper installation or add toner.
100	A polling request (NSC/CIG/DTC) was initiated and the called machine did not respond within 35 seconds (T1).	A polling error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
101	A disconnect signal (DCN) was received from the called machine while waiting for it to identify all capabilities (NSF/CSI/DIS).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
102	A disconnect signal (DCN) was received from the transmitter after sending local capabilities identification (NSF/CSI/DIS).	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.

*NOTE: These error codes are shown in the display and printed in the Activity Report.*

## Communication Error Codes continued

Table 4. Display and activity report communication error codes

Error codes	Description	Procedures
103	A disconnect signal (DCN) was received from the called machine after requesting a polling operation (NSC/CIG/DTC).	A polling error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
104	No documents were available for transmission during a polling request.	Check the remote machine.
105	No documents, with the designated confidential code, were available for transmission during a polling request.	Verify confidential code with remote machine operator.
106	Passwords did not correspond during a polling request.	Verify password with remote machine operator.
107	Passwords did not correspond during security transmission.	Verify password with remote machine operator.
108	Passwords did not correspond during security reception.	Verify password with remote machine operator.
111	The remote machine was not capable of a memory reception as required by a confidential transmission operation.	Check the remote machine capabilities.
112	No response was received from the receiver after 3 attempts to accomplish initial set up and phasing (NSS/TSI/DCS, training, and TCF).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
113	Transmission was not able to successfully complete the training phase, even after fallback to 2400 bps. No confirmation to receive (CFR) was received in response to the training check signal (TCF).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
114	Received a disconnect signal (DCN) after transmitting a training check signal (TCF).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
115	No response to 3 attempts at sending a post message signal (EOP, MPS, EOM, PRI-Q, PPS-Q, EOR-Q, EOR-PRI-Q, PPS-PRI-Q).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.

*NOTE: These error codes are shown in the display and printed in the Activity Report.*

## Communication Error Codes continued

Table 4. Display and activity report communication error codes

Error codes	Description	Procedures
116	Received a disconnect signal (DCN) after transmitting a post message signal (EOP, MPS, EOM, PRI-Q, PPS-Q, EOR-Q, EOR-PRI-Q, PPS-PRI-Q).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
117	The receive T2 timer (6 seconds) timed out while waiting for a post message response (EOP, MPS, EOM, PRI-Q, PPS-Q, EOR-Q, EOR-PRI-Q, PPS-PRI-Q).	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
118	Received a disconnect signal (DCN) while waiting for a post message response (EOP, MPS, EOM, PRI-Q, PPS-Q, EOR-Q, EOR-PRI-Q, PPS-PRI-Q).	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
119	The receive T2 timer timed out while waiting for message after sending a positive response (CFR, MCF, CTR, or PPR).	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
120	The T2 timer timed out while waiting for a command from the transmitter after sending a post message response (FTT, RTP, MCF, RTN, PIP, PIN, or RNR).	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
121	Received a disconnect signal (DCN) while waiting for a command after transmitting a post message response (FTT, RTP, MCF, RTN, PIP, PIN, or RNR).	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
122	One line of data received during message transmission exceeded 5 seconds or carrier was lost for 6 second intervals repeatedly during message reception.	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
123	Received abnormal command or frame length timed out.	A transmit or a receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
127	The remote machine did not have a receive function.	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
128	T1 timer timed out after returning to phase B upon receipt of end of message signaling (EOM); no response to local capabilities identification signals (NSF/CSI/DIS).	A transmit or a receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.

*NOTE: These error codes are shown in the display and printed in the Activity Report.*

## Communication Error Codes continued

Table 4. Display and activity report communication error codes

Error codes	Description	Procedures
130	Called station identification signal (CED) continued longer than 10 seconds.	A transmit or a receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
132	T1 timer timed out after returning to phase B upon transmission of end of message signal (EOM); could not detect signal response. Also, T1 timer timed out after returning to phase B following a voice request.	A transmit or a receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
133	The remote machine was not compatible when a polling operation was requested.	A polling error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
134	A request to repeat the previous command (CRP) was received 3 times.	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
140	Many errors occurred during image data; a signal (RTN) was transmitted or received indicating that the previous message as not satisfactorily completed.	A transmit or a receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
150	The receiving station did not indicate a clearing of the busy condition within 60 seconds (T5 timer time out).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
151	Received a disconnect signal (DCN) while waiting for data after transmitting an appropriate response (CFR, MCF, CTR, or PPR).	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
152	Received a disconnect signal (DCN) after transmitting a signal (CTC) indicating that the transmitter will continue to resend the previous message or a signal (RR) asking if the receiver is ready.	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
153	No response received after transmitting continue to resend (CTC) or receiver status requests (RR) 3 times.	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
156	No data for 10 seconds while facsimile coded data (FCD) was to be transmitted.	A transmit error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.
157	A retransmission request exceeded the setting of the retransmission attempts parameter.	A receive error. If the System Checks procedures (off-line and on-line) do not indicate any problems, go to RAP 54.

*NOTE: These error codes are shown in the display and printed in the Activity Report.*

## RAP 10 Input power check

### WARNING

Improper connection of the grounding conductor can result in the risk of electrical shock. The following must be observed:

- Never use any plug to connect the machine to a power source which does not have a ground connection.
- Never attempt any maintenance function which is not specifically called out in the service procedures.
- Never remove any covers which are fastened with screws, unless so instructed in the service procedures.

### CAUTION

*If any of the voltage measurements are not as specified in the following steps, the cause must be corrected. Caution the customer not to connect the machine to the wall outlet. Advise the customer that a licensed electrician must correct the wiring. Do not attempt to correct the wiring yourself. If you later find the condition has not been corrected, inform your manager in writing of the improper wiring.*

### Procedure

1. Switch off the power at the machine.
2. Disconnect the power cord from the wall outlet.
3. Perform the following line voltage checks.

**USO only** (Figure 1). Perform the following:

Measure the AC voltage between AC Hot and Neutral.

- 104 to 127 VAC

Measure the AC voltage between the AC Neutral and GND.

- < 3 VAC

**RX, UK Only** (Figure 2). Perform the following:

Measure the AC voltage between Live and Neutral.

- 216 to 264 VAC

Measure the AC voltage between Neutral and Earth.

- < 3 VAC

**RX, Europe Only** (Figure 3). Perform the following:

Measure the AC voltage between the supply pins.

- 196 to 244 VAC

Measure the AC voltage between a supply pin and earth.

- 196 to 244 VAC

Measure the AC voltage between the second supply pin and earth.

- 3 VAC

**Y N**

| Inform the customer of insufficient voltage or improper wiring.

4. Check the continuity of each connection through the power cord.

- < 10 ohms for each connection

**Y N**

| Replace the power cord.

5. Go to RAP 11.

**USO**

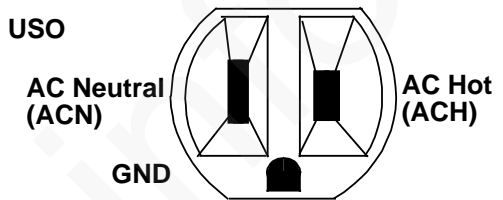


Figure 1. USO Wall Outlet

**RX Only**

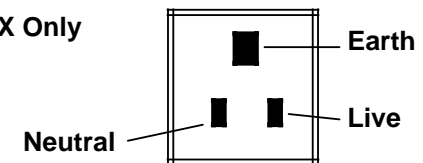


Figure 2. RX UK Wall Outlet

**RX Only**

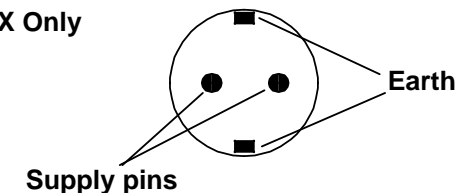


Figure 3. RX Europe Wall Outlet

## RAP 11 Power supply check

### Initial Actions

- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

### WARNING

**AC input voltages can be lethal. Use extreme care while checking the voltages on the LV power supply.**

**Disconnect the power from the LV power supply while checking the continuity or fuses and while removing or reinstalling the components.**

### Procedure

- Check that the control panel assembly and top cover are properly closed.
- Switch on the power.
- Measure the voltages at the driver PWB to ground. (Figure 1)
  - +24.0 VDC (RES24) at CN1 Pin 2
  - +5.0 VDC at CN22 Pin 2
  - +24.0 VDC at CN22 Pin 10**Y N**  
| Go to step 5.
- Go to the procedure which directed you to this RAP or go to System Checkout.
- Switch off the power. Remove the power cord from the machine and the wall outlet. Remove the LV power supply (REP 5.7).

- Place the LV power supply on a suitable non-conductive surface. Make a continuity check of the four fuses (F101, F102, F201, and F301).
- All of the fuses check good.  
**Y N**  
| Go to step 11.
- Insert the 10-way connector (Figure 2) into the LV power supply CN201 (longer pins) (figure 1).

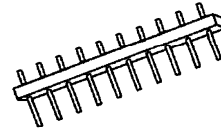
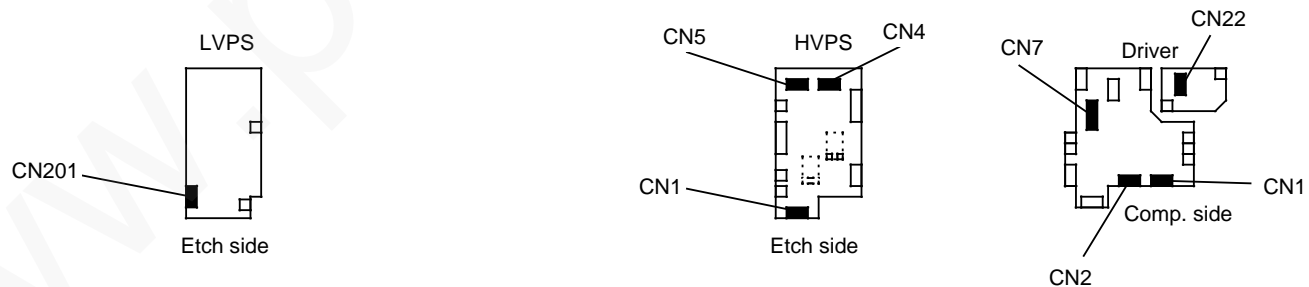
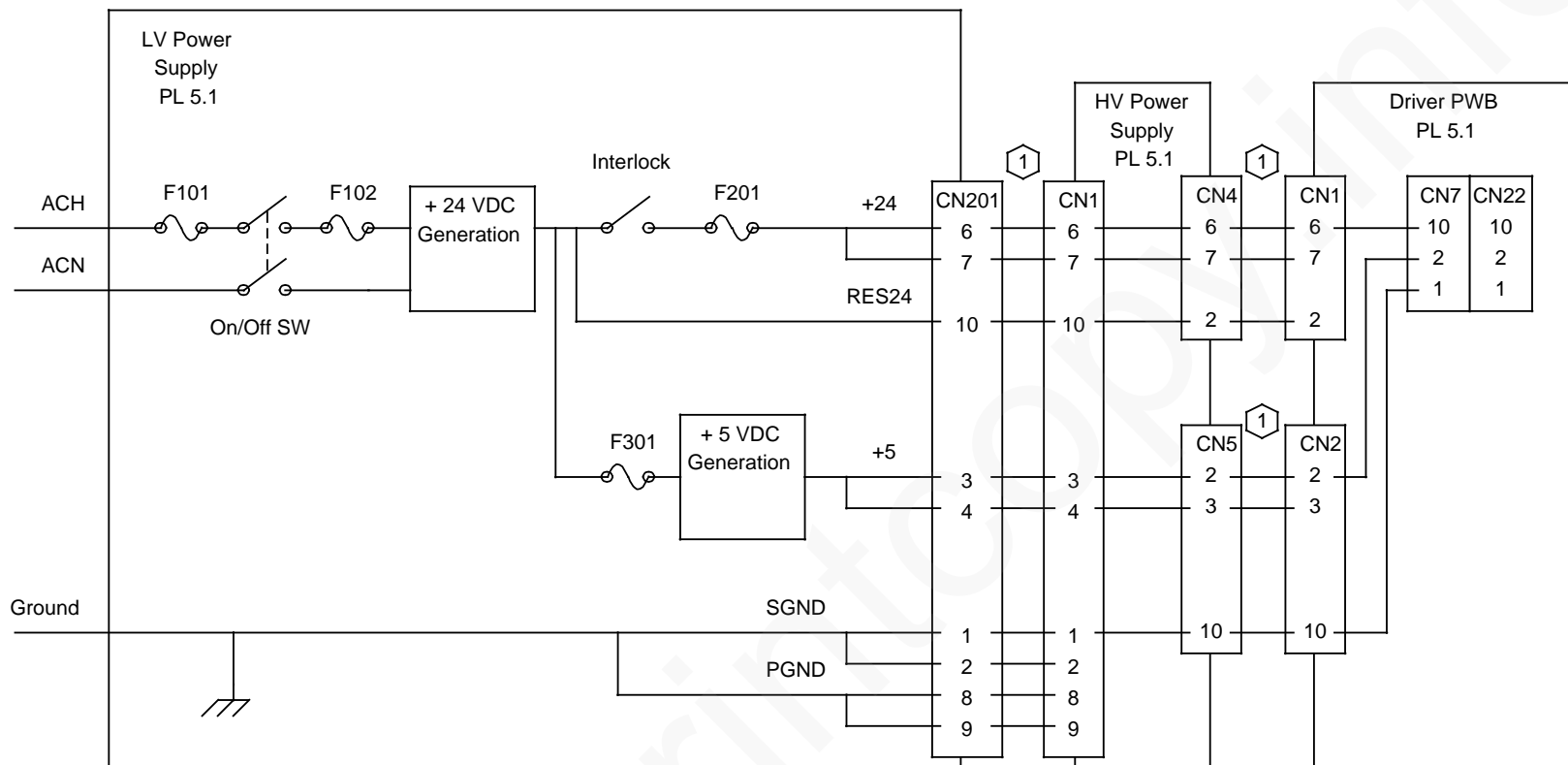


Figure 2. 10-way connector

- Attach the power cord to the LV power supply. Switch the LV power supply switch to the on position. Plug the power cord into the power outlet.  
  
Measure the following voltages at the 10-way connector. (Figure 1)
  - +5.0 VDC across pins 3 and 1
  - +24.0 VDC (RES24) across pins 10 and 1
  - +24.0 VDC (with the interlock cheated) across pins 7 and 1**Y N**  
| Replace the LV power supply (REP 5.7).
- Go to step 13.

- F301 is open.  
**Y N**  
| Replace the bad fuse, then go to step 13.
- Replace the LV power supply (REP 5.7).
- Reinstall the LV power supply. Do not reinstall the bottom pan at this time. The voltages as measured in step 3 of this RAP are correct and the fuses do not open again.  
**Y N**  
| Go to RAP 12.
- Go to the procedure which directed you to this RAP or go to System Checkout.



① Direct Connection

Figure 1. DC Power



## RAP 12 DC short circuit isolation

### Description

This procedure is used to isolate components which are loading down the +5 VDC, +24 VDC, or RES24 voltages.

### Initial Actions

- RAP 11 has been accomplished, indicating that the LV power supply operates properly.
- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

### WARNING

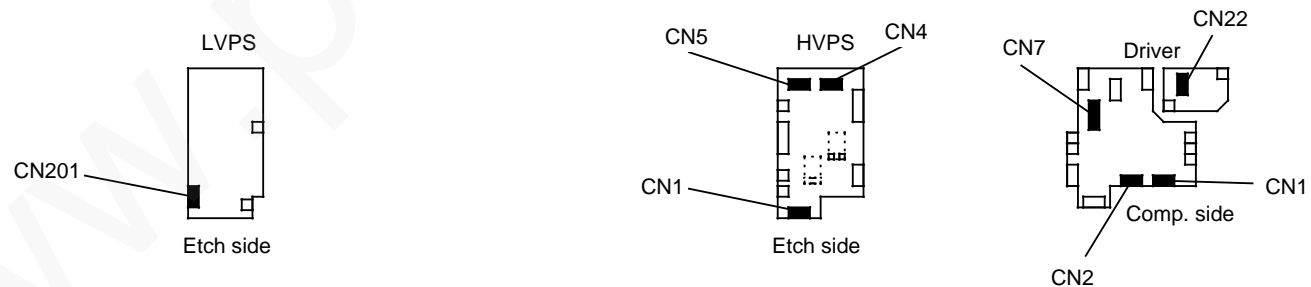
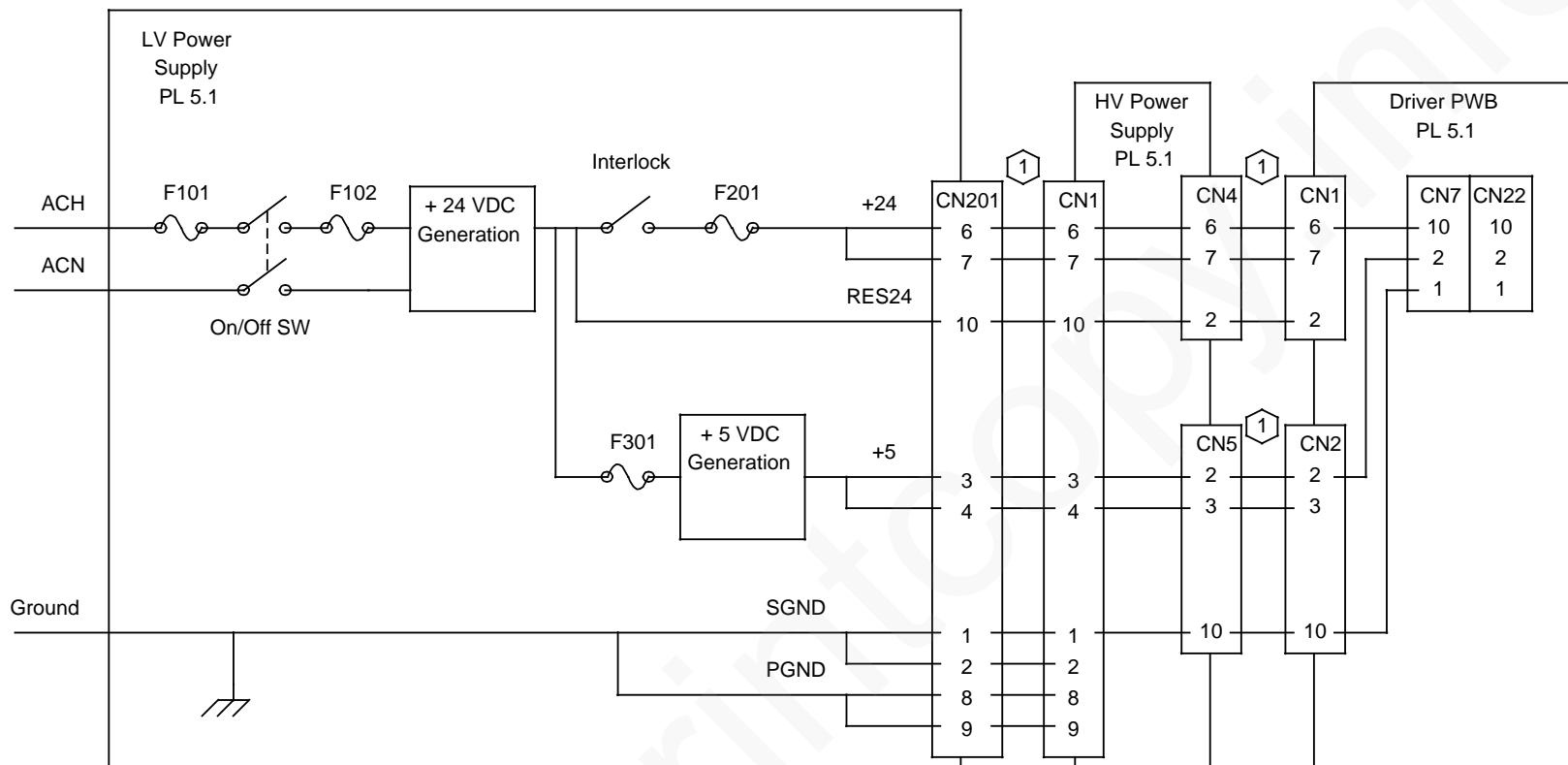
**AC input voltages can be lethal. Use extreme care while checking the voltages on the LV power supply.**

**Disconnect the power from the LV power supply while checking the continuity or fuses and while removing or reinstalling the components.**

### Procedure

1. Remove the PWB chassis far enough to disconnect the main PWB CN1 from the main interconnect PWB CN1.
2. Check that the control panel assembly and top cover are properly closed.
3. Switch on the power.
4. Measure the voltages at the driver PWB to chassis ground. (Figure 1)
  - +24.0 VDC (RES24) at CN1 pin 2
  - +5.0 VDC at CN22 pin 2
  - +24.0 VDC at CN22 Pin 10**Y N**  
| Go to step 6.
5. Go to Step 12.

6. Switch off the power. Reinstall the PWB chassis. Remove the developer assembly and place it in the black bag. Remove the driver PWB (REP 5.5). Put the machine on its left side.
7. Switch on the power.
8. Measure the voltages at the LV power supply to ground. (Figure 1)
  - +5.0 VDC at CN201 Pin 3
  - +24.0 VDC at CN201 Pin 6
  - +24.0 VDC (RES24) at CN201 Pin 10**Y N**  
| Replace the HV power supply (REP 5.8).
9. Consult the DC power distribution diagram in section 7. Reinstall the driver PWB to the HV power supply while leaving all outputs disconnected from the driver PWB. All voltages in step 8 above measure correctly.  
**Y N**  
| Replace the driver PWB (REP 5.5).
10. Connect each item to the driver PWB, one at a time, until the voltage which was loaded down in step 8 is loaded down again.
11. Repair or replace the faulty component.
12. Consult the DC power distribution diagram in section 7. Disconnect the following connector on the main PWB;  
  
7041 W/O Tag 42: CN2  
7042 & 7041 W/ Tag 42: CN3  
  
and then reinstall the main PWB. All voltages in step 4 above measure correctly.  
**Y N**  
| Go to step 16.
13. Reconnect the follow connector on the main PWB; then reinstall the main PWB.  
  
7041 W/O Tag 42: CN2  
7042 & 7041 W/ Tag 42: CN3
14. Disconnect each item from the interconnect PWB, one at a time, until the voltage which was loaded down in step 4 returns.
15. Repair or replace the faulty component.
16. Remove the LCU PWB (REP 5.3) and reinstall the main PWB (REP 5.1). All voltages in step 4 measure correctly.  
**Y N**  
| Go to step 18.
17. Replace the LCU PWB (REP 5.3).
18. A memory option PWB is installed.  
**Y N**  
| Reinstall the LCU PWB (REP 5.3) and replace the main PWB (REP 5.1).
19. Reinstall the LCU PWB (REP 5.3) and remove the memory PWB. All voltages in step 4 measure correctly.  
**Y N**  
| Replace the main PWB (REP 5.1).
20. Replace the memory option PWB (REP 5.9).



1 Direct Connection

Figure 1. DC Power

## RAP 13 Intermittent failures

### Description

Intermittent problems, such as grounding faults can be difficult to identify. They may appear as static related copy quality defects, document or paper feeding problems, and random logic faults.

### Initial Actions

- Switch off the power.
- Disconnect the power cord from the machine.

### Procedure

*NOTE: Ground distribution faults are identified by continuity checks and visual inspection. Each distribution must be checked in isolation between the source and destination.*

1. Check that continuity exists between the chassis and the following items (See the chassis ground connections diagram in section 7):

Measure < 10 ohms on the following:

- Drum (polished ends)
- Transfer corotron case
- Detack corotron case
- Main PWB (mounting screws)
- LCU PWB (ground wire)
- Driver PWB (mounting screws)
- Setup PWB (mounting screws)
- Laser shield
- Paper feed static eliminator
- Document feed static eliminator
- Auxiliary tray feed roller shafts

Measure < 20 ohms on the following:

- Paper feed roller shaft
- Rubber pinch roller shaft

All measurements were good.

**Y N**

| Repair or replace the faulty component as required.

2. Using the DC power and ground distribution diagram in section 7, measure the continuity of the SGND and PGND signals. All measurements were good.

**Y N**

| Repair or replace the faulty component.

3. Save a copy of all directory and machine options reports, print any documents stored in memory, and then perform a RAM Initialization procedure (13). This test clears all memory and resets the machine options to default conditions.

## RAP 14 LB14 system error

### Initial Actions

- Switch off the power.
- Inspect the charge scorotron and the transfer corotron ground and high voltage contacts, repair as required.
- Ensure that Setup PWB (Tag 1) is installed.

### Procedure

1. This is a 7041 W/O Tag 42.

**Y N**

| Go to step 4.

2. Disconnect the density control harness at the in-line connector near the solenoid. Measure the resistance across the pins of the density control harness.

- Near 0 ohms with control rotated to the full counter clockwise direction
- Near 9 K ohms with control rotated to the full clockwise direction

**Y N**

| Replace the density control (REP 3.6).

3. Reconnect the density control harness.

4. Remove the driver PWB shield and reconnect the setup PWB. Check the high voltage drive signals. (Figure 1)

Measure the driver PWB CN1, pins 14, 15, and 16 to ground.

- +.70 to .95 VDC at pin 14, during printing
- +.60 to .70 VDC at pin 15, during printing
- +1.0 to 1.2 VDC at pin 16, during printing

**Y N**

| Replace the following parts in the order listed:

- Driver PWB (REP 5.5).
- HV power supply (REP 5.8).

5. Check the high voltage feedback signals. Measure the driver PWB CN1, pins 11, 12, and 13 to ground. (Figure 1)

- +.70 to .90 VDC at pin 11, during printing
- +1.1 to 1.2 VDC at pin 12, during printing
- +.70 to .80 VDC at pin 13, during printing

**Y N**

| Replace the HV power supply (REP 5.8).

6. Replace the following parts in the order listed. If this does not resolve the problem, go to RAP 13.

- Setup PWB (REP 5.6).
- Drum module.
- Check the contacts on the corotron assembly.

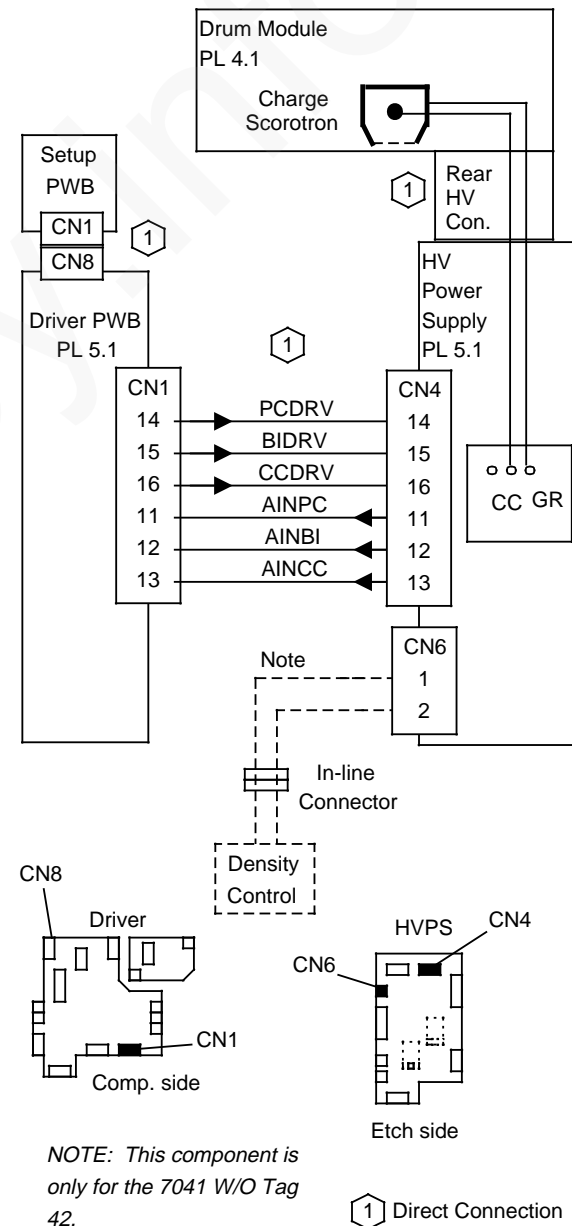


Figure 1. HV Drive and Feedback

## RAP 19 LB19 system error

### Initial Actions

- Switch off the power.
- Check that the main PWB is fully seated with the HV power supply.

### Procedure

1. Disconnect the auxiliary tray from the driver PWB CN3, if applicable. Problem resolved.  
**Y N**  
 | Go to step 3.
2. Replace the auxiliary tray motor and PWB assembly.

3. Check the main PWB command signal. (Figure 1)  
 Measure the driver PWB CN2, pin 14 to ground.  
 • +5.0 VDC during standby  
**Y N**  
 | Replace the main PWB (REP 5.1).
4. Check the driver status signal. (Figure 1)  
 Measure the driver PWB CN2, pin 15 to ground.  
 • > +3.6 VDC during standby  
**Y N**  
 | Replace the driver PWB (REP 5.5).
5. Replace the setup PWB (REP 5.6).

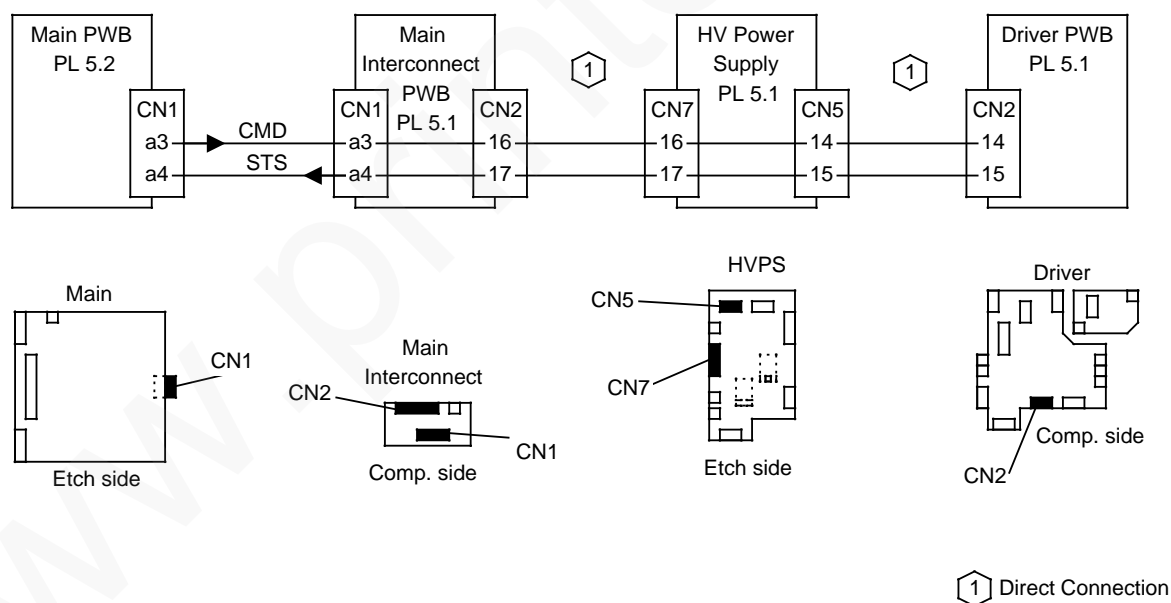


Figure 1. Command and Status Signals

## RAP 20 Incorrect tones

### Initial Actions

- Check that the following connectors are fully seated on the main PWB:

7041 W/O Tag 42

- CN1 (Main Interconnect PWB)
- CN3 (LCU PWB)
- CN4 (Speaker)

7042 & 7041 W/ Tag 42

- CN1 (Main Interconnect PWB)
- CN2 (LCU PWB)
- CN5 (Speaker)

### Procedure

1. Some tones are heard from the speaker.  
**Y N**  
| Go to step 7.
2. The display is blank or indicates a garbled message.  
**Y N**  
| Go to step 4.
3. Replace the following parts in the order listed:
  - Main PWB (REP 5.1)
  - Control panel (REP 1.1)
4. Continuous tones (telephone ringing) are heard from the speaker.  
**Y N**  
| Go to step 7.
5. Disconnect the telephone cable from the wall jack. Continuous tones are still heard.  
**Y N**  
| Inform the customer of telephone problems.

6. Replace the LCU PWB (REP 5.3).
7. At least one control panel LED is illuminated.  
**Y N**  
| Go to step 12.
8. Switch off the power.
9. Remove the main PWB (REP 5.1).
10. Check the speaker resistance.  
Disconnect the speaker from the main PWB and measure the resistance across the pins of the speaker harness.  
  
7041 W/O Tag 42: CN4  
7042 & 7041 W/ Tag 42: CN5
  - 6 to 9 ohms**Y N**  
| Replace the speaker (REP 5.4).
11. Replace the main PWB (REP 5.1).
12. This is a 7041 W/O Tag 42 .  
**Y N**  
| Go to RAP 10.
13. The fans are operating.  
**Y N**  
| Go to RAP 10.
14. Go to RAP 11.

## RAP 21 Blank or garbled display

### Description

This RAP does not apply to displays which have unexpected messages, only to those symptoms of blank or garbled display.

### Initial Actions

- Check that the following connectors are fully seated:

7041W/O TAG 42

- Main PWB CN2 (Interconnect PWB harness)
- Interconnect PWB CN7 (Control panel harness)
- Control panel PWB CN1 (Control panel harness)

7042 & 7041 W/ TAG 42

- Main PWB CN3 (Interconnect PWB harness)
- Interconnect PWB CN2 (Control panel harness)
- Control panel PWB CN1 (Control panel harness)

### Procedure

1. The fan located in the rear of the machine is operating.

**Y N**

| Go to RAP 11.

2. Replace the following parts in the order listed:
  - Control panel (REP 1.1)
  - Main PWB (REP 5.1)

## RAP 22 Control panel LEDs

### Initial Actions

Verify that the customer has not selected options which are causing the abnormal illumination of the control panel LEDs.

### Procedure

1. Perform a service LED test (See section 6 for detailed procedures).
  - Enter the service mode. (If unable to enter service mode, go to step 4.)
  - Select the service test 06.

2. The LEDs illuminate in the following repeating cycle:

7041 W/O Tag 42

- Manual Receive
- Fine
- Standard
- Halftone
- Tel . / Voice Req.

7042 & 7041 W/ TAG 42

- Error
- Busy
- Superfine
- Fine
- Standard
- Halftone

**Y N**

| Replace the control panel (REP 1.1).

3. Replace the main PWB (REP 5.1).
4. Replace the following parts in the order listed:
  - Main PWB (REP 5.1)
  - Control panel (REP 1.1)

## RAP 23 Control panel keys

### Description

The purpose of this RAP is to exercise and test the control panel keys.

### Initial Actions

- Switch off the power.

### Procedure

1. Check the access panel switch. (Figure 1)  
Disconnect the connector listed below from the interconnect PWB and measure pin 19 of the harness to ground.

7041W/O TAG 42: CN7

- 2 K ohms with the panel open
- < 3 ohms with the panel closed

7042 & 7041 W/ TAG 42: CN2

- < 3 ohms with the panel open
- 2 K ohms with the panel closed

**Y N**

- | Replace the control panel assembly (REP 1.1)

2. Reconnect the access panel switch connector.
3. Switch on the power and perform a control panel key test; service test 03, mode 0 (See section 6 for detailed procedures).
  - Enter the service mode. (If unable to enter service mode, go to step 5.)
  - Select the service test 03, mode 0.
4. Press the keys in the proper sequence. The test comes to a normal end (the message ERROR is not displayed).  
**Y N**
  - | Replace the control panel assembly (REP 1.1).
5. Replace the following parts in the order listed:
  - main PWB (REP 5.1).
  - control panel assembly (REP 1.1).

*NOTE: Dotted line represents 7042 & 7041 W/ Tag 42 signals.*

CN\*

7041W/O Tag 42: CN7

7042 & 7041 W/ Tag 42: CN2

CN\*\*

7041W/O Tag 42: CN2

7042 & 7041 W/ Tag 42: CN3

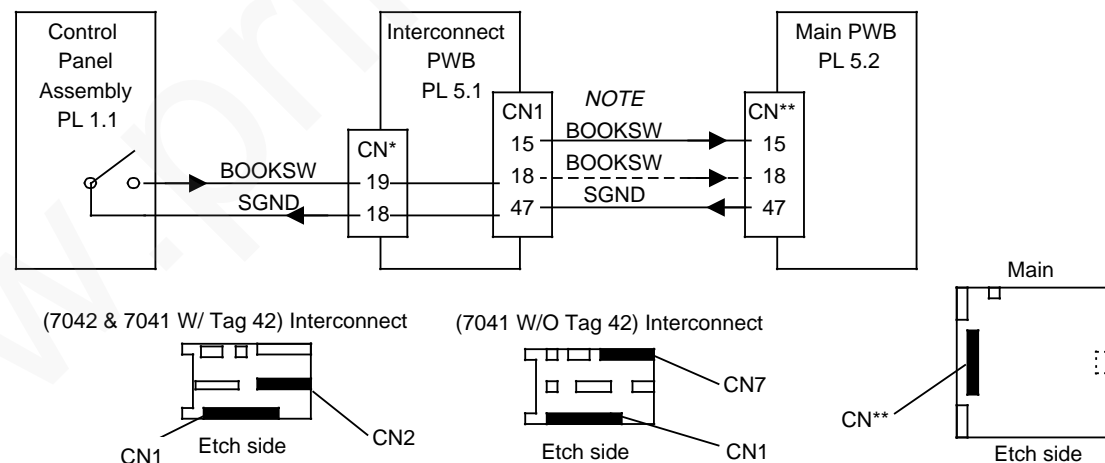


Figure 1. Access Panel Switch



## RAP 24 Fans

### Initial Actions

- Check that the following connectors are fully seated:
  - Driver PWB CN13 (Fan)
  - LV power supply CN202 (PS Fan)

### Procedure

1. Switch on the power. The PS fan (front) operates.  
**Y N**  
| Go to RAP 11. If the DC voltages measure good, in RAP 11, replace the PS fan.

2. Leave the machine in standby for at least 1 minute. System error lockup, code LB13, appears.

**Y N**

| Replace the driver PWB (REP 5.5).

3. Check the fan (rear) motor. (Figure 1)  
Switch off the power.  
Disconnect the driver PWB CN13.  
Measure the resistance across the pins of the fan harness.

- 2 K to 5 K ohms

**Y N**

| Replace the fan (REP 3.3).

4. Replace the driver PWB (REP 5.5).

## RAP 25 Incorrect message

### Initial Actions

- Check that the following connectors are fully seated:
  - Driver PWB CN4 (Developer assembly)
  - Driver PWB CN10 (Laser)
  - Interconnect PWB CN3 (Document sensors)

### Procedure

*NOTE: This procedure does not apply to error codes. If an error code occurs go to the appropriate table at the front of this section.*

1. The display continues to show "WARMING UP", and nothing else, after 1 minute.

**Y N**

| Go to step 10.

2. Open the printer cover and remove the drum module and developer assembly. Place the drum module in the black bag. Cheat the interlock. The fuser can be seen cycling (the light cycles on and off). This may require up to 1 minute.

**Y N**

| Go to RAP 38.

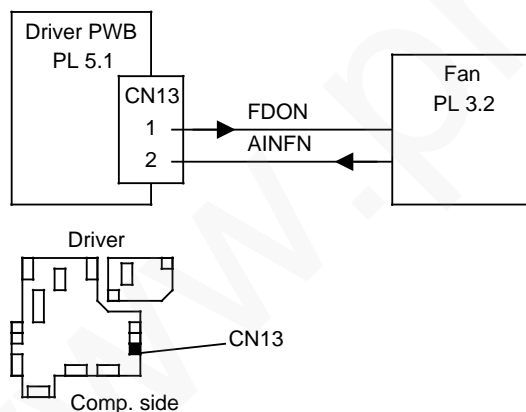


Figure 1. Fan control

## RAP 25 (continued)

3. Reinstall the drum module and developer assembly. Switch off the power. Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.  
**Y N**  
| Go to step 6.
4. If an auxiliary tray is installed disconnect the harness from the driver PWB CN3. Problem is eliminated.  
**Y N**  
| Go to step 6.
5. Replace the auxiliary tray motor and PWB assembly.
6. Check the driver PWB ready signal. Measure the driver PWB, CN2, pin 12 to ground. (Figure 1)
  - 0.0 VDC during standby**Y N**  
| Go to step 8.
7. Replace the main PWB (REP 5.1).

8. Switch off the power. Remove the main PWB far enough to disconnect it from the HV power supply. Check the driver PWB ready signal. Measure the driver PWB, CN2, pin 12 to ground. (Figure 1)
  - 0.0 VDC during standby**Y N**  
| Replace the driver PWB ( REP 5.5).
9. Replace the main PWB (REP 5.1)
10. Find the message in Table 1 which was included with the display "WARMING UP". Go to the RAP indicated in Table 1.

Table 1. Incorrect messages

Message	RAP
CLOSE COVER	RAP 26
DOCUMENT JAM	RAP 40
DIAL OR COPY	RAP 40
OFF-HOOK	RAP 52
NO COUNTER	RAP 37
NO DRUM UNIT	RAP 35
ADD PAPER	RAP 32
PAPER JAM	RAP 31
TONER EMPTY	RAP 36

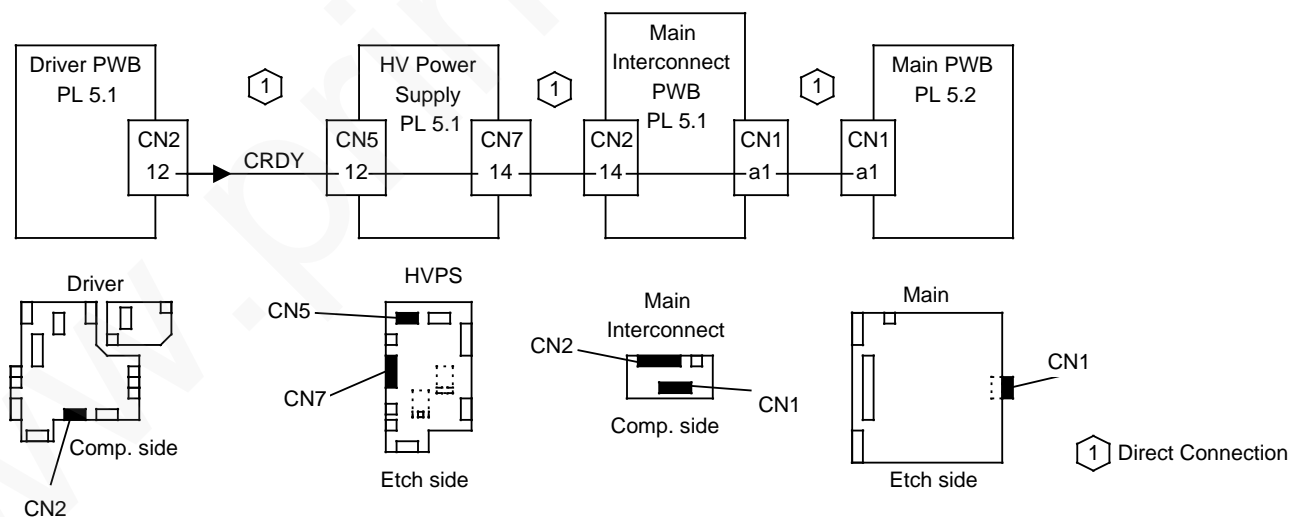


Figure 1. Driver Ready

## RAP 26 Cover interlocks

### Initial Actions

- Switch off the power.
- Remove the front and rear covers (REP 1.6).

### Procedure

1. Check the scanner interlock.  
Measure the following connector on the interconnect PWB, pin 1 to ground (Figure 2).

7041 W/O Tag 42: CN2

7042 & 7041 W/ Tag 42: CN4

- < 5 ohms with the scanner closed.
- 5 K ohms with the scanner open.

**Y N**

| Inspect the scanner interlock switch for proper operation by the scanner front latch. Repair or replace the scanner interlock (REP 2.5) as required.

2. The printer cycled at power up.

**Y N**

| Go to step 4.

3. Replace the main PWB (REP 5.1).

4. Go to RAP 11. If the DC voltages measure correctly in RAP 11 return to step 5 in this procedure.

5. The top cover interlock actuator operates properly and the interlock switch on the LV power supply is fully closed when the top cover is latched (Figure 1).

**Y N**

| Repair as required.

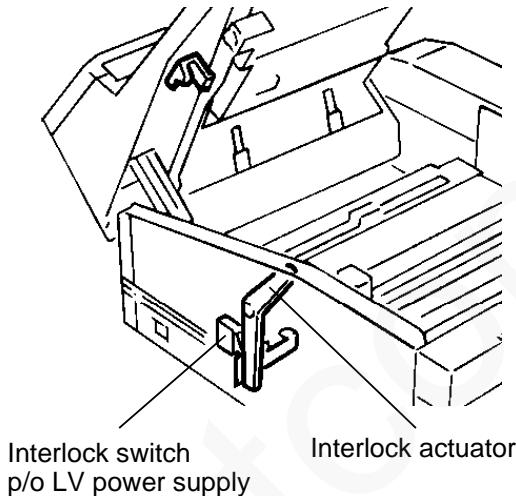


Figure 1. Top cover interlock

6. Switch off the power. Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
7. Check +24 VDC at the driver PWB.  
Measure the driver PWB, CN22, pin 10 to ground (Figure 3).
  - +24.0 VDC with the printer closed
  - +4.0 VDC or less with the printer open

**Y N**

| Replace the LV power supply (REP 5.7).
8. Replace the driver PWB (REP 5.5).

NOTE: Dotted line represents  
7042 & 7041 W/ Tag 42  
signals.

CN\*  
7041 W/O Tag 42: CN2  
7042 & 7041 W/ Tag 42: CN4  
  
CN\*\*  
7041 W/O Tag 42: CN2  
7042 & 7041 W/ Tag 42: CN3

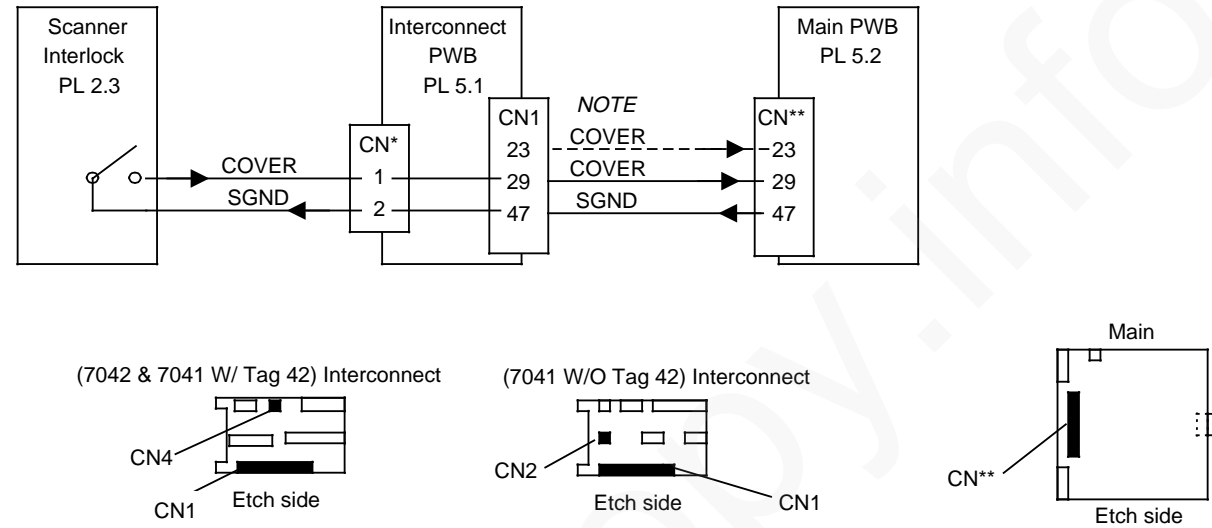


Figure 2. Scanner Interlock

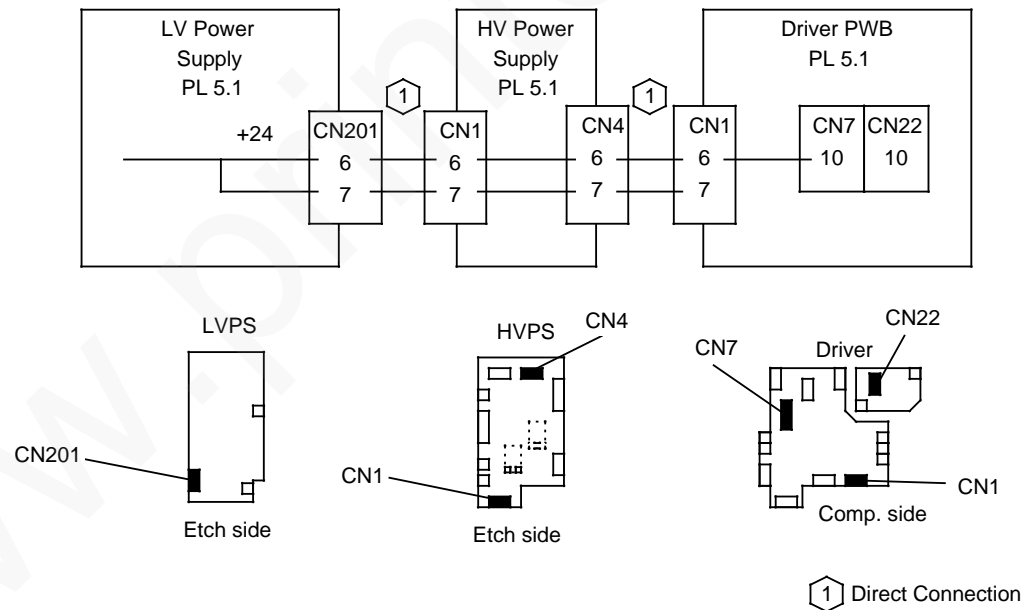


Figure 3. +24 Volts

## RAP 30 Printer does not cycle

### Initial Actions

- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
- Check that the following connectors are fully seated:
  - Driver PWB CN8 (Setup PWB)
  - Driver PWB CN9 (Drum counter)

### Procedure

1. The display indicates "PAPER JAM".  
**Y N**  
| Go to step 3.
2. Go to RAP 31.
3. The display indicates "CLOSE COVER".  
**Y N**  
| Go to step 5.
4. Go to RAP 26.
5. If an auxiliary tray is installed, disconnect the driver PWB CN3. Problem is corrected.  
**Y N**  
| Go to step 7.
6. Replace the auxiliary tray motor and PWB assembly.
7. Check + 5 VDC at the driver PWB. (Figure 1)  
Measure the driver PWB, CN22, pin 2 to ground.
  - +5.0 VDC during standby**Y N**  
| Go to RAP 11.
8. Check + 5 VDC monitor signal. (Figure 1)  
Measure the driver PWB, CN2, pin 16 to ground.
  - +5.0 VDC during standby**Y N**  
| Replace the driver PWB (REP 5.5).
9. Check the RES24 signal at the driver PWB. (Figure 1)  
Measure the driver PWB, CN1, pin 2 to ground.
  - + 24.0 VDC during standby**Y N**  
| Replace the driver PWB (REP 5.5).
10. Remove the service drum counter and reinstall the customer drum counter. The printer now cycles.  
**Y N**  
| Replace the following parts in the order listed:
  - Driver PWB (REP 5.5)
  - Setup PWB (REP 5.6)
11. Order a service drum counter. Finish this call with the customer drum counter.

*NOTE: The customer drum counter will not enable the setup tool.*

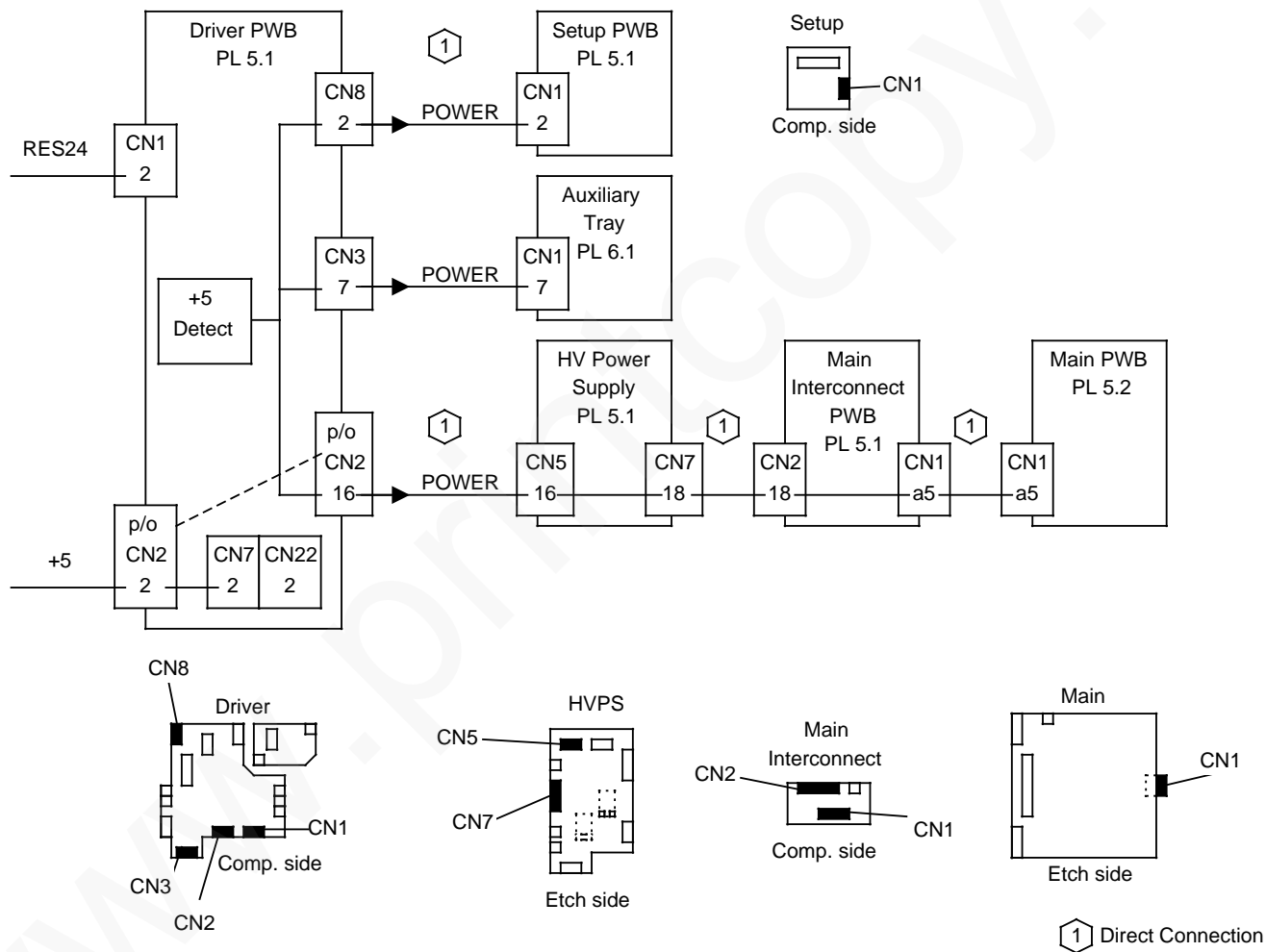


Figure 1. +5 Volt Monitor

## RAP 31 Paper jams

### Initial Actions

- Check the printer paper path for obstructions.
- Check the detach corotron for dirt.
- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

### Procedure

1. Check the paper sensor signal.  
Measure the driver PWB, CN1, pin 3 to ground. (Figure 1)
  - 0.0 VDC when actuated
  - + 5.0 VDC when not actuated**Y N**  
| Check that the HV power supply CN9 is properly connected. Repair as required or replace the paper sensor (REP 3.7).
2. Check the paper output sensor signal.  
Measure the driver PWB, CN12, pin 1 to ground. (Figure 1)
  - 0.0 VDC during standby
  - +5.0 VDC when actuated (slide a sheet of paper through the fuser, the left ends of the fuser pressure release levers may have to be raised)**Y N**  
| Replace the fuser assembly (REP 3.15).

3. Check the cassette paper sensor signal.  
Measure the driver PWB, CN5, pin 1 to ground. (Figure 1)
  - + 5.0 VDC when actuated
  - 0.0 VDC when not actuated**Y N**  
| Check that the cassette paper sensor is being fully actuated by the cassette tray when paper is loaded. Repair the tray or replace the right frame assembly (REP 3.5).
4. The feed solenoid energizes during a copy operation or an internal printer test.  
**Y N**  
| Go to step 6.
5. Open the printer cover. Check the interlock. The drum turns.  
**Y N**  
| Go to RAP 33.
6. Inspect the feed solenoid. Ensure that CN20 is connected to the driver PWB or that the auxiliary tray solenoid is connected to the auxiliary tray PWB, as applicable. Also, check that the pawl on the solenoid is in place and not binding.

*NOTE: The flat on the feed roller must be down, towards the friction pad, during standby.*

7. Check the feed solenoid adjustment.
  - ADJ 3.1 for the upper cassette solenoid
  - ADJ 6.1 for the auxiliary tray cassette solenoid

8. Switch off the power. Disconnect the driver PWB CN20 or the auxiliary tray solenoid harness, as applicable.
9. Check the feed solenoid coil.  
Measure the harness, across pins 1 and 2.
  - 100 to 150 ohms (Figure 1)**Y N**  
| Replace the feed solenoid (REP 3.4) for the upper cassette or the motor and PWB assembly for the auxiliary tray.
10. Replace the driver PWB (REP 5.5) or the auxiliary tray motor and PWB assembly, as applicable.

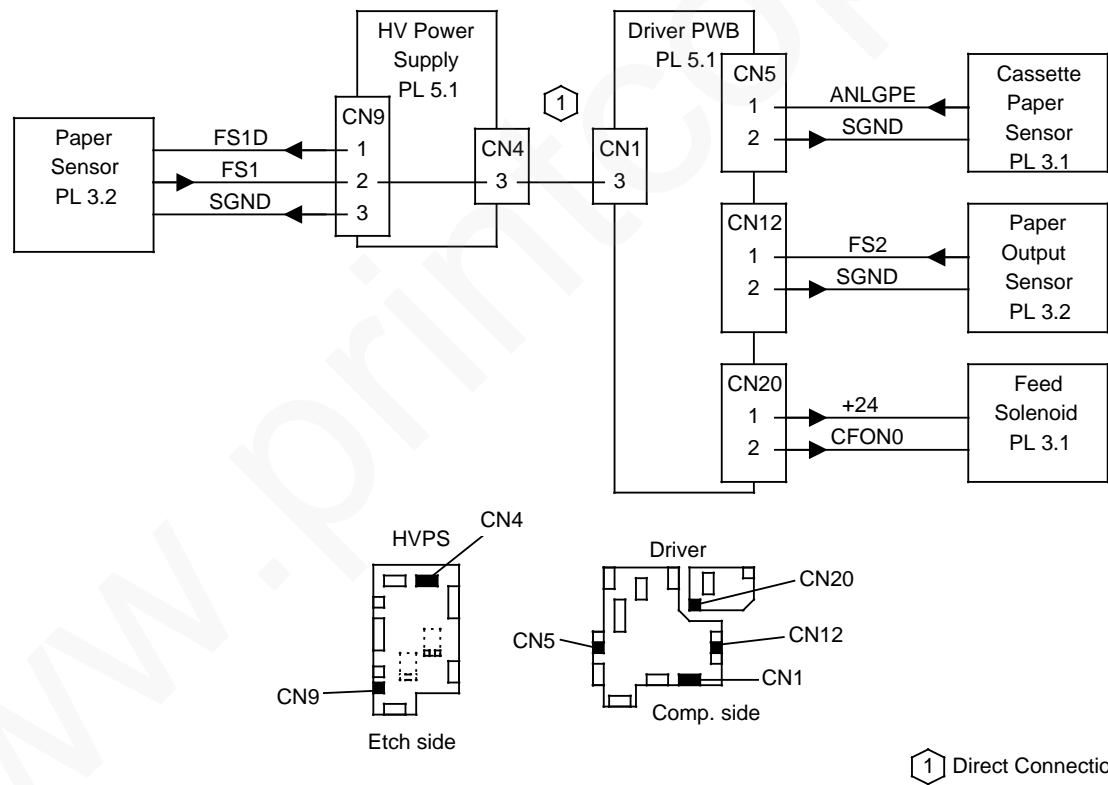


Figure 1. Printer Sensors and Solenoid



## RAP 32 Add paper

### Initial Actions

- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

### Procedure

- Check the cassette paper sensor signal. Measure the driver PWB, CN5, pin 1 to ground. (Figure 1)
  - + 5.0 VDC when actuated
  - 0.0 VDC when not actuated

**Y N**

| Check that the cassette paper sensor is being fully actuated by the cassette tray when paper is loaded. Repair the tray or replace the right frame assembly (REP 3.5).
- Replace the driver PWB (REP 5.5).

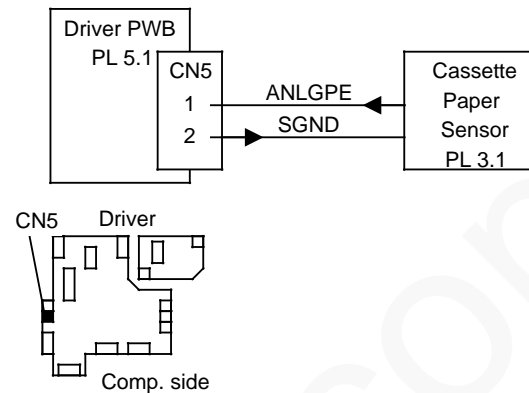


Figure 1. Cassette Paper Sensor

## RAP 33 Paper feeding

### Initial Actions

- Switch off the power.
- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
- Check that the following connector is fully seated:
  - Driver PWB CN23 (Print motor)

### Procedure

1. Disconnect the driver PWB, CN23.
2. Measure the resistance at the printer motor CN23 harness. Readings are as follows (Figure 1):

Test Point	Reading
• Each pin to the chassis	infinity
• Pin 1 to pin 2	2 to 5 ohms
• Pin 3 to pin 4	2 to 5 ohms
• Pin 1 to pin 3	infinity
• Pin 2 to pin 4	infinity
• Pin 1 to pin 4	infinity
• Pin 2 to pin 3	infinity

**Y N**

| Replace the print motor (REP 3.2).

3. Reconnect the driver PWB, CN23.
4. Switch on the power.
5. Check the print motor drive signals. (Figure 1)  
Measure the voltage from each pin of the driver PWB, CN23 to ground.
  - + 24.0 VDC during standby
  - + 15.0 VDC during a print cycle**Y N**  
| Replace the driver PWB (REP 5.5).
6. Go the RAP 60.

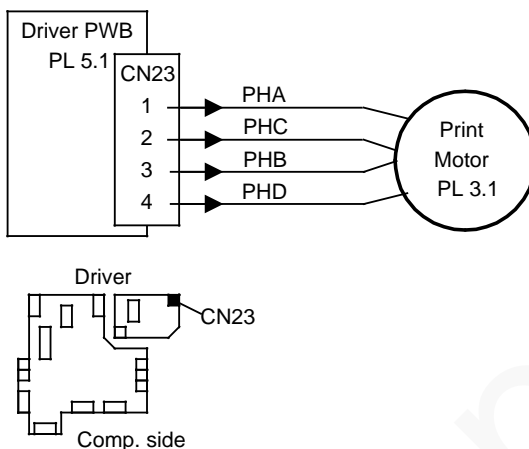


Figure 1. Print Motor

## RAP 34 Laser

### Initial Actions

- Switch off the power.
- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
- Check that the following connectors are fully seated:
  - Driver PWB CN10 (Laser)
  - Laser CN1 (Laser Harness)

### Procedure

#### CAUTION

*All measurements on the driver PWB, CN10 must be made with care. Shorting adjacent pins together may cause component failure.*

1. Check the ground to the laser. (Figure 1)  
Measure the driver PWB, CN10, pin 2 and pin 6 to ground.
  - 2 ohm.**Y N**  
| Using the DC Power & Ground Distribution diagram in section 7, trace the ground circuits for the laser. Isolate the problem through the driver, HV power supply and LV power supply. Repair as required.
2. Switch on the power.

3. Check +24 VDC and +9 VDC. (Figure 1)  
Measure the driver PWB, CN10, pins 4 and 5 to ground.
  - + 24.0 VDC during standby at pin 4
  - +8.5 to 9.5 VDC during standby at pin 5**Y N**  
| Replace the driver PWB (REP 5.5).
4. Check the laser motor drive signal. (Figure 1)  
Measure the driver PWB, CN10, pin 3 to ground.
  - +5.0 VDC during standby
  - 0.0 VDC during printing**Y N**  
| Replace the driver PWB (REP 5.5).
5. Check the laser sync signal. (Figure 1)  
Measure the driver PWB, CN10, pin 1 to ground.
  - + 5.0 VDC during standby
  - 0.0 VDC during printing**Y N**  
| Replace the laser (REP 3.1).
6. Check the laser usable area signal. (Figure 1)  
Measure the driver PWB, CN10, pin 7 to ground.
  - + 5.0 VDC during standby**Y N**  
| Replace the laser (REP 3.1).
7. Check the laser power control signal. (Figure 1)  
Measure the driver PWB, CN10, pin 9 to ground.
  - + 1.0 to 1.4 VDC during standby
  - + 3.0 to 3.4 VDC during printing**Y N**  
| Replace the driver PWB (REP 5.5).
8. Check the laser monitor signal. (Figure 1)  
Measure the driver PWB, CN10, pin 10 to ground.
  - + .005 to .010 VDC during standby
  - + .090 to .110 VDC during printing**Y N**  
| Replace the laser (REP 3.1).
9. Replace the setup PWB (REP 5.6).



Invisible laser radiation

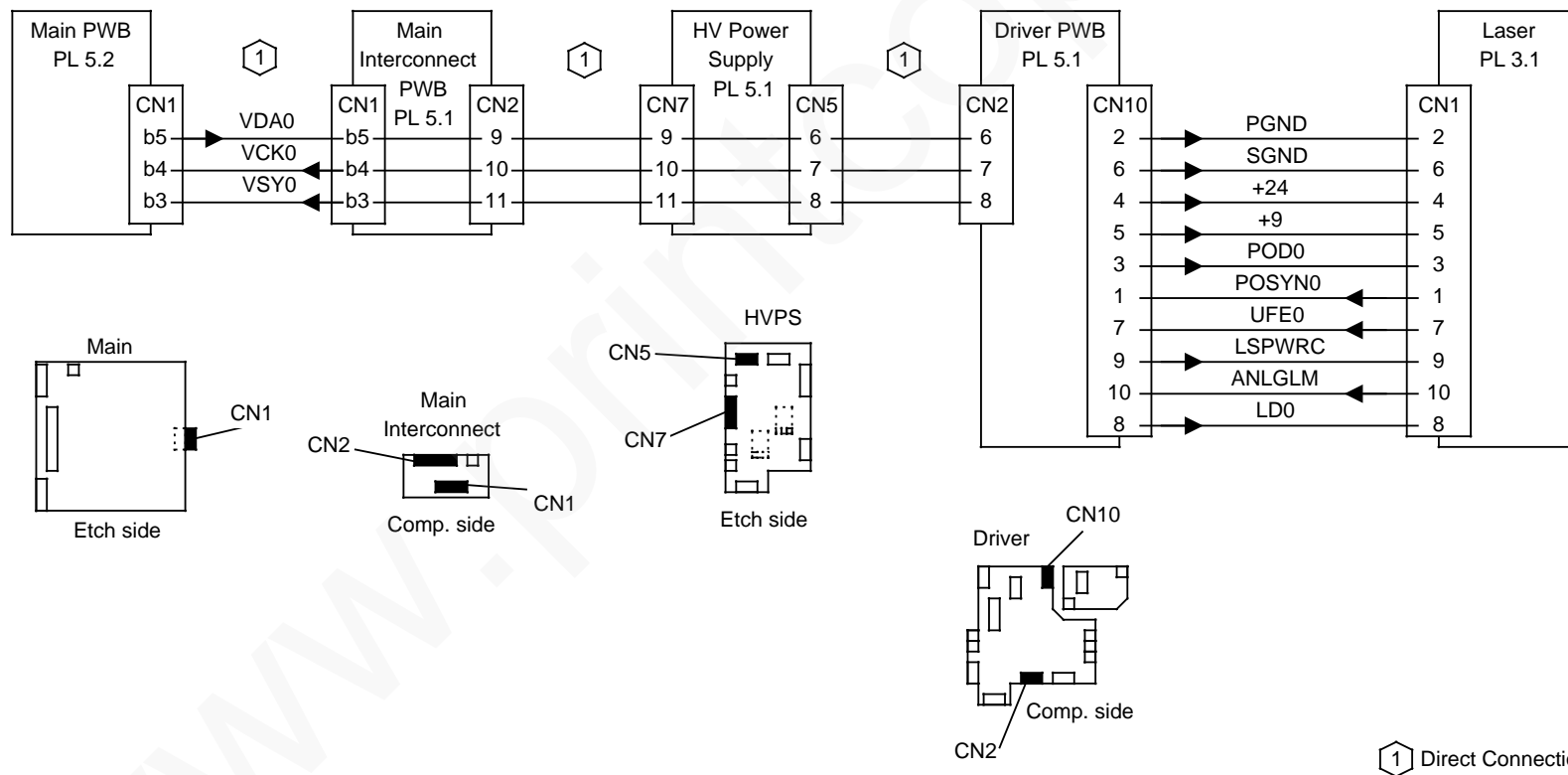


Figure 1. Printer Video

## RAP 35 No drum module

### Initial Actions

- Clean the two square contacts on the top of the drum module.
- Clean the corresponding contacts on the bottom of the printer laser and check that the contacts are not deformed.
- Check that the following connectors are fully seated:
  - Driver PWB CN10 (Laser)
  - Laser CN1 (Laser Harness)

### Procedure

1. Open the printer cover.
2. Check the discharge LED power signals. (Figure 1)  
Measure the voltage across the two contacts on the bottom of the laser.
  - + 24.0 VDC, for about 5 seconds, each time the top cover interlock is actuated

**Y N**  
| Go to step 4.

3. Replace the drum module.
4. Disconnect the laser harness at the laser.
5. Check the discharge LED power signals. (Figure 1)  
Measure the voltage across pins 11 and 12 of the open end of the harness.
  - + 24.0 VDC for about 5 seconds, each time the top cover interlock is actuated

**Y N**  
| Go to step 8.
6. Remove the laser (REP 3.1). Check that the two screws holding the red and green wires to the contacts on the bottom of the laser are tight. Connections are good.

**Y N**  
| Repair as required.
7. Replace the laser (REP 3.1).

8. Remove the shield from the driver PWB and then reconnect the setup PWB.

### CAUTION

*All measurements on the driver PWB CN10 must be made with care. Shorting adjacent pins together may cause component failure.*

9. Check the discharge LED power signals. (Figure 1)  
Measure the voltage across pins 11 and 12 of the driver PWB, CN10.
  - + 24.0 VDC, for about 5 seconds, each time the top cover interlock is actuated

**Y N**  
| Replace the driver PWB (REP 5.5).
10. Check the continuity on pins 11 and 12 of the laser to driver PWB harness. Repair as required.

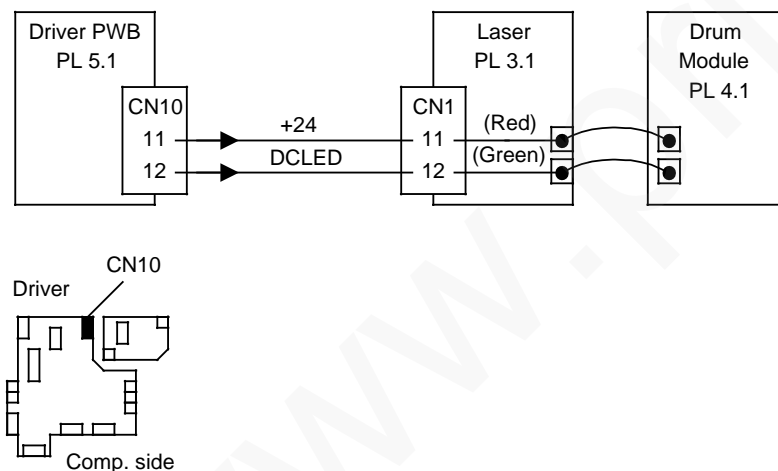


Figure 1. Discharge Lamp and Drum Sensing



Invisible laser radiation

## RAP 36 Toner empty

### Initial Actions

- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
- Check that the driver PWB CN4 (developer assembly) is fully seated.

### Procedure

- Open the top cover and cheat the printer interlock. The magnetic roller turns.  
**Y N**  
| Go to step 3.
- Go to step 6.
- Check the developer assembly drive belt. Repair or replace if required.

- Check the motor drive signals. (Figure 1)  
Measure the driver PWB CN4 pins 1 and 2 to ground.
  - +24.0 VDC at pins 1 and 2 during standby
  - 0.0 VDC at pin 2 for a short period after opening and closing the top cover**Y N**  
| Replace the driver PWB (5.5).
- Replace the motor/sensor (REP 4.3).
- Check the toner sensor + 5 VDC supply. (Figure 1)  
Measure the driver PWB, CN4, pin 3 to ground.
  - + 5.0 VDC for a short period after opening and closing the top cover**Y N**  
| Replace the driver PWB (REP 5.5).
- Switch off the power.

- Check the ground to the toner sensor. (Figure 1)  
Measure the driver PWB, CN4, pin 5 to ground.
  - 2 ohms**Y N**  
| Go to the DC Power & Ground Distribution diagram in section 7 and trace the source of the open ground. Repair as necessary.
- Switch on the power.  
Check the toner sensor output signal. (Figure 1)  
Measure the driver PWB, CN4, pin 4 to ground.
  - >+ 1.6 VDC for a short period after opening and closing the top cover**Y N**  
| Replace the motor/sensor (REP 4.3).
- Replace the driver PWB (REP 5.5).

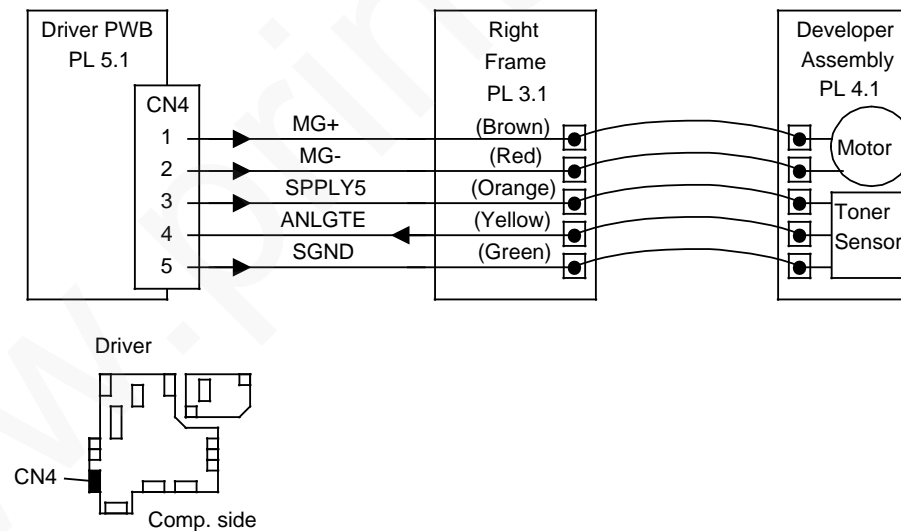


Figure 1. Developer Assembly

## RAP 37 No counter

### Procedure

1. Remove the service drum counter and reinstall the customer drum counter. The NO COUNTER display is gone.

**Y N**

| Replace the driver PWB (REP 5.5).

2. Order a service drum counter. Finish this call with the customer drum counter.

*NOTE: The customer drum counter will not enable the setup tool.*

## RAP 38 Fuser

### Procedure

1. Switch on the power. The fuser cycles on and off (light is seen at the front end of the fuser assembly), this may require up to 1 minute, if a print operation had just completed.

**Y N**

| Go to step 6.

2. Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

3. Check the fuser thermistor input signal. (Figure 1)  
Measure the driver PWB, CN11, pin 1 to ground.

- +2.5 to 2.7 VDC during standby

**Y N**

| Replace the driver PWB (REP 5.5).

4. Check the fuser thermistor output signal. (Figure 1)  
Measure the driver PWB, CN11, pin 2 to ground.

- < 0.10 VDC when the fuser is completely cold, somewhat higher (up to the hot reading below) when not totally cold
- > 1.30 VDC when the fuser is hot
- Rises at least .10 VDC during printing

**Y N**

| Replace the fuser assembly (REP 3.15).

5. Replace the driver PWB (REP 5.5).
6. Check AC input to fuser. (Figure 1)  
Measure the voltage across the LV power supply, CN101, pins 1 and 2.

*NOTE: This connector is accessible through the bottom chassis, from the front of the machine.*

- Measures the same as the local AC power when the fuser should be heating

**Y N**

| Go to step 8.

7. Replace the fuser assembly (REP 3.15).
8. Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
9. Check the fuser on signal. (Figure 1)  
Measure the driver PWB, CN2, pin 1 to ground.

### CAUTION

*This measurement must be made with care to prevent component failure. Pin 1 is partially blocked by a driver PWB component. Switch off the power, make the connection, and then switch on the power, if required.*

- 0.0 VDC when the fuser should be heating
- + 24.0 VDC between the heating cycles

**Y N**

| Replace the driver PWB (REP 5.5).

10. Replace the LV power supply (REP 5.7).

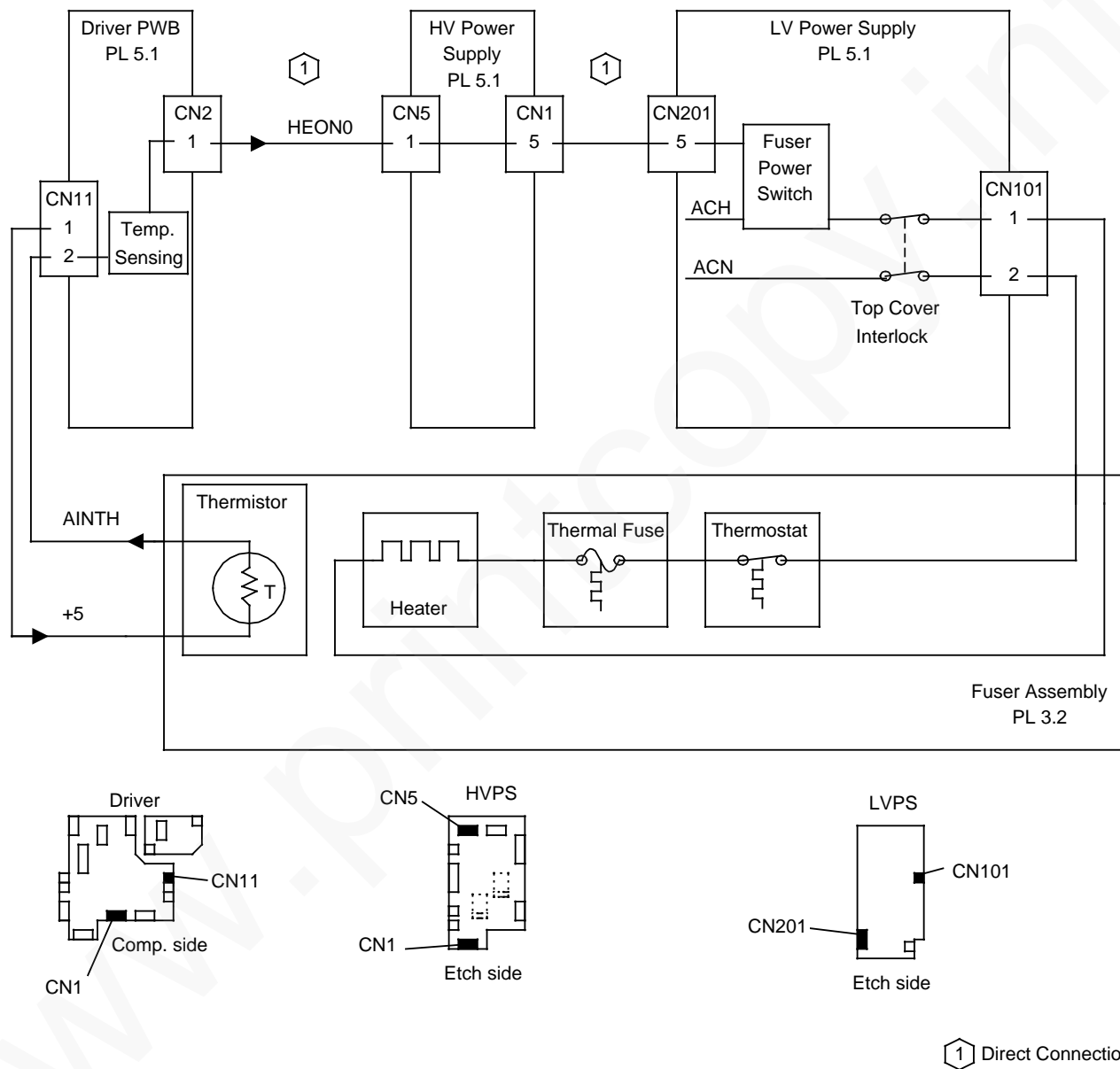


Figure 1. Fuser



## RAP 40 Document detection

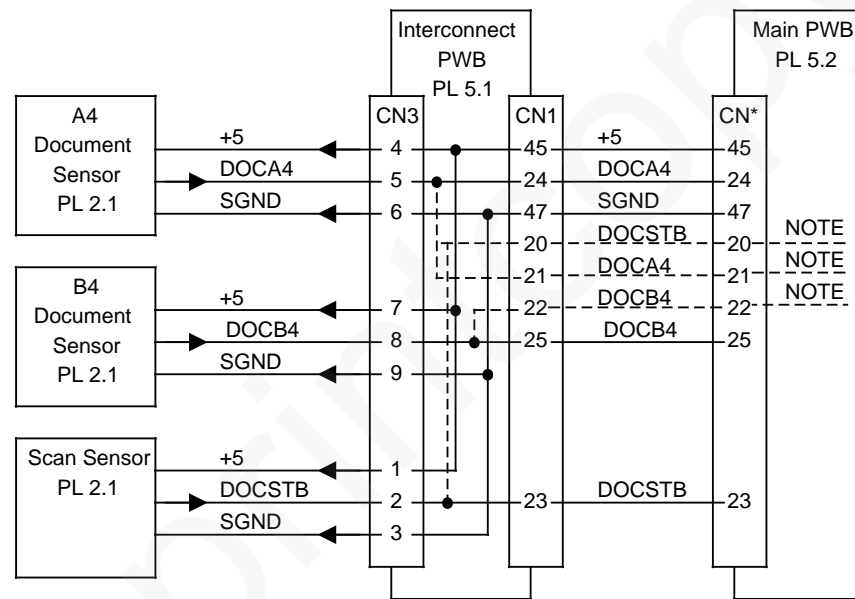
### Initial Actions

- Check the document path for obstructions.
- Check that the following connector is fully seated:
  - Interconnect PWB CN3 (Document sensors)

### Procedure

1. Perform a Sensor/Interlock test (04). Initiate the test, open the scanner cover, and manually actuate the three document sensors. The first three digits of the display will change states when actuated.  
**Y N**  
| Go to step 3.
2. Go to RAP 41.
3. Proceed as directed below, depending on the digit which did not respond correctly in step 1 above.
  - First digit was bad. Go to step 4.
  - Second digit was bad. Go to step 7.
  - Third digit was bad. Go to step 10.
4. Check the A4 document sensor power. (Figure 1)  
Measure the interconnect PWB, CN3, pins 4 and 6 to ground.
  - + 5.0 VDC at pin 4 during standby
  - 0.0 VDC at pin 6 during standby**Y N**  
| Go to the DC Power and Ground Distribution diagram in sec. 7 to isolate further.

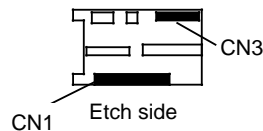
5. Check the A4 document sensor output. (Figure 1)  
Measure the interconnect PWB, CN3, pin 5 to ground.
  - 0.0 VDC actuated
  - + 5.0 VDC not actuated**Y N**  
| Replace the following parts:
  - Document sensors (7041 W/O Tag 42) (REP 2.4).
  - Document sensors (7042 & 7041 W/ Tag 42) (REP 2.13).
6. Replace the main PWB (REP 5.1).
7. Check the B4 document sensor power. (Figure 1)  
Measure the interconnect PWB, CN3, pins 7 and 9 to ground.
  - + 5.0 VDC at pin 7 during standby
  - 0.0 VDC at pin 9 during standby**Y N**  
| Go to the DC Power and Ground Distribution diagram in sec. 7 to isolate further.
8. Check the B4 document sensor output. (Figure 1)  
Measure the interconnect PWB, CN3, pin 8 to ground.
  - 0.0 VDC actuated
  - + 5.0 VDC not actuated**Y N**  
| Replace the following parts:
  - Document sensors (7041 W/O Tag 42) (REP 2.4).
  - Document sensors (7042 & 7041 W/ Tag 42) (REP 2.13).
9. Replace the main PWB (REP 5.1).
10. Check the scan sensor power. (Figure 1)  
Measure the interconnect PWB, CN3, pins 1 and 3 to ground.
  - + 5.0 VDC at pin 1 during standby
  - 0.0 VDC at pin 3 during standby**Y N**  
| Go to the DC Power and Ground Distribution diagram in sec. 7 to isolate further.
11. Check the scan sensor output. (Figure 1)  
Measure the interconnect PWB, CN3, pin 2 to ground.
  - 0.0 VDC actuated
  - + 5.0 VDC not actuated**Y N**  
| Replace the following parts:
  - Document sensors (7041 W/O Tag 42) (REP 2.4).
  - Document sensors (7042 & 7041 W/ Tag 42) (REP 2.13).
12. Replace the main PWB (REP 5.1).



NOTE: Dotted line represents 7042 & 7041 W/ Tag 42 signals.

CN\*  
7041 W/O Tag 42: CN2  
7042 & 7041 W/ Tag 42: CN3

(7042 & 7041 W/ Tag 42) Interconnect



(7041 W/O Tag 42) Interconnect

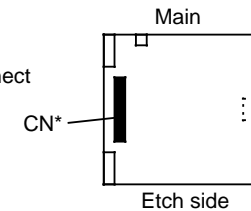
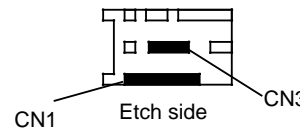


Figure 1. Document Sensors

## RAP 41 Document feeding

### Initial Actions

- Switch off the power.
- Check that the following connector is fully seated
  - Interconnect PWB CN6 (the scan motor)
  - Interconnect PWB CN3 (Document Sensors).

### Procedure

1. The documents skew or jam only when the document tray guides are fully open and documents are biased to the front or rear of the scanner. (This would include long edge feeding.)

**Y N**

| Go to step 3.

2. Go to REP 2.3 and check that the video module and guide are biased downward.
3. Disconnect the interconnect PWB, CN6.
4. Measure the resistance at the scan motor at the following connector harness. Readings are as follows (Figure 1):

7041W/O TAG 42: CN6

<u>Test Point</u>	<u>Reading</u>
• Each pin to the chassis	infinity
• Pin 1 to pin 2	2 to 10 ohms
• Pin 1 to pin 3	infinity
• Pin 1 to pin 4	infinity
• Pin 2 to pin 3	infinity
• Pin 2 to pin 4	infinity
• Pin 3 to pin 4	2 to 10 ohms

7042 & 7041 W/ TAG 42: CN5

#### Test Point

#### Reading

- Each pin to the chassis infinity
- Pin 1 to pin 2 2 to 20 ohms
- Pin 1 to pin 3 infinity
- Pin 1 to pin 4 infinity
- Pin 1 to Pin 5 2 to 20 ohms
- Pin 1 to pin 6 infinity
- Pin 2 to pin 3 infinity
- Pin 2 to pin 4 infinity
- Pin 2 to pin 5 2 to 20 ohms
- Pin 2 to pin 6 infinity
- Pin 3 to pin 4 2 to 20 ohms
- Pin 3 to pin 5 infinity
- Pin 3 to pin 6 2 to 20 ohms
- Pin 4 to pin 5 infinity
- Pin 4 to pin 6 2 to 20 ohms
- Pin 5 to pin 6 infinity

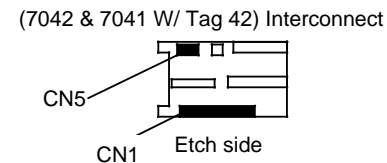
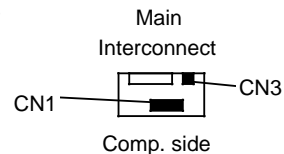
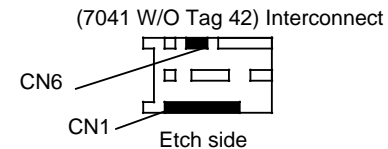
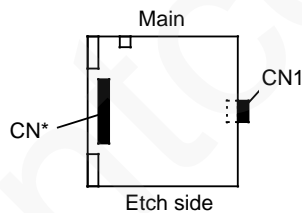
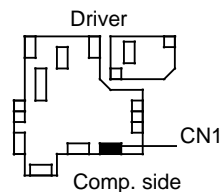
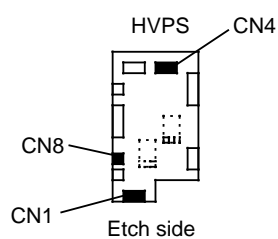
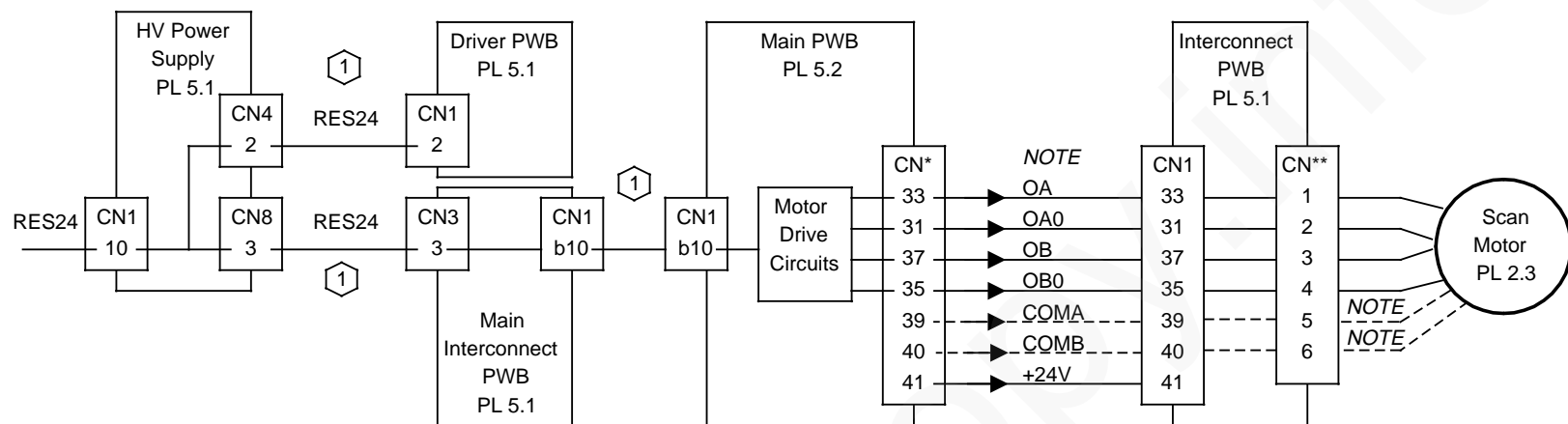
**Y N**

| Replace the following parts:

- scan motor (7041 W/O Tag 42) (REP 2.6).
  - scan motor (7042 & 7041 W/ Tag 42) (REP 2.15).
5. Reconnect the scan motor to the interconnect PWB.
  6. Switch on the power.
  7. Check the RES24 signal. (Figure 1)  
Measure the voltage at the interconnect PWB, CN1 pin 2 to ground.
    - +24.0 VDC during standby
  8. Review and apply RAP 60 as required; then, replace the main PWB(REP 5.1), if the problem still occurs.

**Y N**

| Go to RAP 11.



NOTE: Dotted line represents 7042 & 7041 W/ Tag 42 signals.

CN\*  
7041 W/O Tag 42: CN2  
7042 & 7041 W/ Tag 42: CN3

CN\*\*  
7041 W/O Tag 42: CN6 (4 pins)  
7042 & 7041 W/ Tag 42: CN5 (6 pins)

1 Direct Connection

Figure 1. Scanner Motor Drive

## RAP 50 No dial tone

### Initial Actions

- Check that the data cable and the handset (or the telephone) are connected properly.

### Procedure

1. Lift the handset. Dial tone is heard from the handset.  
**Y N**  
| Go to step 3.
2. Replace the following parts in the order listed:
  - LCU PWB (REP 5.3)
  - Main PWB (REP 5.1)
3. Connect another telephone to the telephone wall line outlet. Dial tone is heard when the handset is lifted.  
**Y N**  
| Inform the customer of telephone line problems.
4. Reseat the connectors, then replace the data cable. Problem is resolved.  
**Y N**  
| Replace the following parts in the order listed:
  - LCU PWB (REP 5.3).
  - Handset or telephone.
  - Main PWB (REP 5.1).
5. Go to the procedure which directed you to this RAP or go to System Checkout.

## RAP 51 No dialing or connection

### Initial Actions

- Check that the machine is configured correctly for the dialing system (tone or pulse).
- Check that the data cable and the handset or the telephone are connected properly.

### Procedure

1. Connect another telephone to the telephone wall line outlet. Dialing works correctly.  
**Y N**  
| Inform the customer of telephone line problems.
2. Replace the following parts in the order listed:
  - LCU PWB (REP 5.3)
  - Main PWB (REP 5.1)

## RAP 52 Handset

### Initial Actions

- Check that the handset and telephone cables are properly connected.

### Procedure

- Take the handset out of the cradle. OFF-HOOK is displayed.

Y N

| Go to step 6.

- Dial tone can be heard in the handset speaker.

Y N

| Replace the following parts in the order listed:

- LCU PWB (REP 5.3)
- Handset

- Dial another telephone. Voice can be exchanged.

Y N

| Replace the handset.

- Return the handset to the cradle. The normal standby display returns.

Y N

| Go to step 6.

- Go to the procedure which directed you to this RAP or go to System Checkout.

- Disconnect the handset cable from the LCU PWB. Measure the resistance across pins 3 and 6 of the handset cable (Figure 1).

- > 10 K ohms with handset in cradle
- < 5 ohms with handset out of cradle

Y N

| Replace the handset.

- Replace the LCU PWB (REP 5.3).

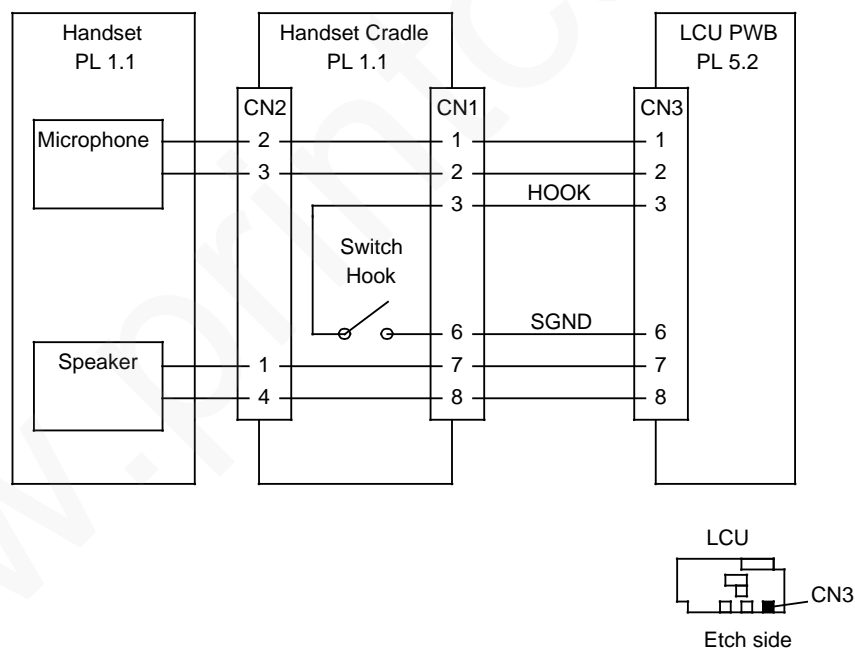


Figure 1. Handset

## RAP 53 Machine does not answer

### Initial Actions

- Check that manual receive is not selected.

### Procedure

1. Ring indication is heard, but the machine does not answer.

**Y N**

| Go to step 3.

2. Replace the following parts in the order listed:

- LCU PWB (REP 5.3)
- Main PWB (REP 5.1)

3. Connect another telephone to the wall jack. Call the telephone. The telephone rings.

**Y N**

| Inform the customer of the telco line problem.

4. Replace the following parts in the order listed:

- Telephone data cable
- LCU PWB (REP 5.3)

## RAP 54 Communication errors

### Procedure

1. Turn on the protocol monitor. Record the signals that are displayed during the communication operations.
  - a. Press the [Service] key.
  - b. Enter [0618] from the keyboard.
  - c. Press the [Start] key.
  - d. (7042 & 7041 W/ Tag 42 only) Press and hold down the [Job Status] key to display signals continuously .

*NOTE: Use the procedure above to turn off the protocol monitor after RAP is completed.*

2. Problem occurs during send operation.

**Y N**

| Go to step 8.

3. Send three pages to a known good machine with the operation that caused the error. The operation completes normally without a communication error.

**Y N**

| Maintain the list of error codes or signals that you recorded and contact the next level of support for additional assistance.

4. Repeat the same operation with the machine that caused the original problem. Operation completes normally without a communication error.

**Y N**

| Go to step 6.

5. Go to the procedure which directed you to this RAP, or; go to System Checkout. Turn off the protocol monitor.

6. Repeat the same operation at 4800 BPS. Refer to service options in section 6 for forced 4800 option. Operation completes normally without a communication error.

**Y N**

| Have the remote operator call for service. Turn off the protocol monitor.

7. Conditions require slower transmission speed. Turn off the protocol monitor, inform the customer, and go to Final Actions.

8. Receive three pages from a known good machine with the operation that caused the error. The operation completes normally without a communication error.

**Y N**

| Go to step 12.

9. Repeat the operation with the machine that caused the original problem. Operation completes normally without a communication error.

**Y N**

| Have the remote operator call for service. Turn off the protocol monitor.

10. Repeat the same operation at 4800 BPS. Refer to service options in section 6 for forced 4800 option. Operation completes normally without a communication error.

**Y N**

| Have the remote operator call for service. (7041 W/O Tag 42) Turn off the protocol monitor.

## RAP 54 (continued)

11. Conditions require slower transmission speed. Inform the customer, and go to System Checkout. Turn off the protocol monitor.
12. Maintain the list of error codes or signals that you recorded and contact the next level of support for additional assistance, or turn off the protocol monitor and go to System Checkout.

## RAP 55 Machine does not transmit correctly

### Initial Actions

- Check that the handset and telephone cables are properly connected.

### Procedure

1. Lift the handset. Dial tone is heard from the handset.  
**Y N**  
| Go to step 8.
2. Perform a send operation.
  - a. Open the access cover.
  - b. Load a document into the ADF.
  - c. Enter the telephone number of the remote machine.
  - d. Press the start key.
  - e. Press and hold down the Speaker/Monitor key until the transmit operation is completed.
3. Display indicates that a job number is assigned and accepted.  
**Y N**  
| Replace the main PWB (REP 5.1).
4. Dial tone and dialing sequence is heard from the speaker.  
**Y N**  
| Replace the following parts in the order listed:
  - LCU PWB (REP 5.3).
  - Main PWB (REP 5.1).
5. The Busy LED lights (flashes)  
**Y N**  
| Go to RAP 22.

6. Transmit operation is successful.  
**Y N**  
| Go to RAP 54.
7. Go to the procedure which directed you to this RAP or go to System Checks.
8. Connect another telephone to the telephone wall line outlet. Dial tone is heard when the handset is lifted.  
**Y N**  
| Inform the customer of telephone line problems.
9. Reseat the connectors; then replace the data cable. Problem is resolved.  
**Y N**  
| Replace the following parts in the order listed:
  - LCU PWB (REP 5.3)
  - Handset (PL 1.1)
  - Main PWB (REP 5.1)
10. Go to the procedure which directed you to this RAP or go to System Checks.



## RAP 54 (continued)

11. Conditions require slower transmission speed. Inform the customer, and go to System Checkout. Turn off the protocol monitor.
12. Maintain the list of error codes or signals that you recorded and contact the next level of support for additional assistance, or turn off the protocol monitor and go to System Checkout.

## RAP 55 Machine does not transmit correctly

### Initial Actions

- Check that the handset and telephone cables are properly connected.

### Procedure

1. Lift the handset. Dial tone is heard from the handset.  
**Y N**  
| Go to step 8.
2. Perform a send operation.
  - a. Open the access cover.
  - b. Load a document into the ADF.
  - c. Enter the telephone number of the remote machine.
  - d. Press the start key.
  - e. Press and hold down the Speaker/Monitor key until the transmit operation is completed.
3. Display indicates that a job number is assigned and accepted.  
**Y N**  
| Replace the main PWB (REP 5.1).
4. Dial tone and dialing sequence is heard from the speaker.  
**Y N**  
| Replace the following parts in the order listed:
  - LCU PWB (REP 5.3).
  - Main PWB (REP 5.1).
5. The Busy LED lights (flashes)  
**Y N**  
| Go to RAP 22.

6. Transmit operation is successful.  
**Y N**  
| Go to RAP 54.
7. Go to the procedure which directed you to this RAP or go to System Checks.
8. Connect another telephone to the telephone wall line outlet. Dial tone is heard when the handset is lifted.  
**Y N**  
| Inform the customer of telephone line problems.
9. Reseat the connectors; then replace the data cable. Problem is resolved.  
**Y N**  
| Replace the following parts in the order listed:
  - LCU PWB (REP 5.3)
  - Handset (PL 1.1)
  - Main PWB (REP 5.1)
10. Go to the procedure which directed you to this RAP or go to System Checks.

## RAP 56 Machine does not receive correctly

### Initial Actions

- Check that manual receive is not selected in customer options..
  - Listen to ring is selected in the customer options.
1. Perform a receive operation.
  2. Ring indication is heard.  
**Y N**  
| Replace the following parts in the order listed:
    - LCU PWB (REP 5.3)
    - Main PWB (REP 5.1)
  3. Press the Job Status key. Busy LED begins to flash and the display indicates connecting and an on line condition.  
**Y N**  
| Replace the following parts in the order listed:
    - LCU PWB (REP 5.3).
    - Main PWB (REP 5.1)
  4. Receive operation is successfully.  
**Y N**  
| Go to RAP 54.
  5. Go to the procedure which directed you to this RAP or go to System Checks.

## RAP 60 Mechanical checkout

### Description

- The following procedure applies to all gears, pulleys, shafts, rollers, belts, springs, and bearings in these areas:
  - Front and rear frames
  - All paper cassettes
  - Upper and lower scanner
  - Upper and lower printer

### Procedure

*NOTE: If lubrication is required, the complete lubrication procedure is included in section 6 of this manual.*

1. Remove the front and rear covers (REP 1.6).
2. Inspect all shafts and shaft supports. Shafts turn freely.  
**Y N**  
| Replace the shaft, shaft supports, or bearings.
3. Inspect all bearings. Bearings are secure on shafts and positioned properly in frame cutouts.  
**Y N**  
| Position bearings in frame cutouts or replace the bearings.
4. Inspect the pulleys. Pulleys are secure on shafts and are not broken.  
**Y N**  
| Replace the pulley, E-ring, or split washer.
5. Inspect upper scanner assembly. Upper scanner closes and latches.  
**Y N**  
| Replace the latch spring or latches.

6. Inspect top cover. Top cover closes and latches.  
**Y N**  
| Replace the latch spring, latch, or right frame.
7. Inspect all gears. Gears are secure on shafts and are not broken. Gears mesh properly.  
**Y N**  
| Tighten set screw in gear or replace the gear, E-rings or split washers.
8. Inspect all rollers. All rollers are intact and have not became hard or glazed to the point of slipping under drive conditions.  
**Y N**  
| Replace or repair as necessary.
9. Inspect all belts. All belts are intact, are aligned for proper drive, and are not excessively worn.  
**Y N**  
| Replace or align as required.
10. Go to the procedure which directed you to this RAP or go to System Checkout.

## RAP 61 Memory option

### Procedure

*NOTE: This is a 7041 W/O Tag 42 procedure only.*

1. Verify that the memory option PWB switch is set correctly.
  - 1 meg option, bit 1 is on and 2 is off
  - 2 meg option, bit 1 is off and 2 is on

**Y N**

| Set the switches correctly.
2. 2 meg option is installed.

**Y N**

| Set switch to 1 meg, bit 1 is on and bit 2 is off.
3. Error code still occurs after you switch on the power.

**Y N**

| Replace the two 1 meg SRAM. (Refer to Section 6, Memory Option Kits.)
4. Replace the memory option PWB (REP 5.9).

## RAP 62 Auxiliary tray option

### Initial Actions

- Remove the upper paper cassette.

### Procedure

- Check the auxiliary tray power and ground signals. (Figure 1)  
Measure the following signals at the driver PWB CN3 to ground.

- +24 VDC at pin 1 during standby
- + 5.0 VDC at pin 2 during standby

Switch off the power.

- < 5 ohms at pins 5 and 6 to ground

Y N

| Replace the driver PWB (REP 5.5).

- Switch on the power.  
Check the following display conditions.
  - With the auxiliary tray cassette loaded the display indicates that paper is loaded (2nd: LET. or LEG.).
  - With the cassette removed the display indicates that paper is empty (ADD PAPER).

Y N

| Go to step 5.

- Copy a document. The operation completes normally without indicating a paper jam.

Y N

| Replace the auxiliary tray motor and PWB assembly.

- Go to the procedure which directed you to this RAP or go to System Checkout.
- The auxiliary tray cassette lifts the paper high enough to engage the paper sensor.

Y N

| Repair as required.

Replace the following parts in the order listed:

- Auxiliary tray paper sensor
- Auxiliary tray motor and PWB assembly

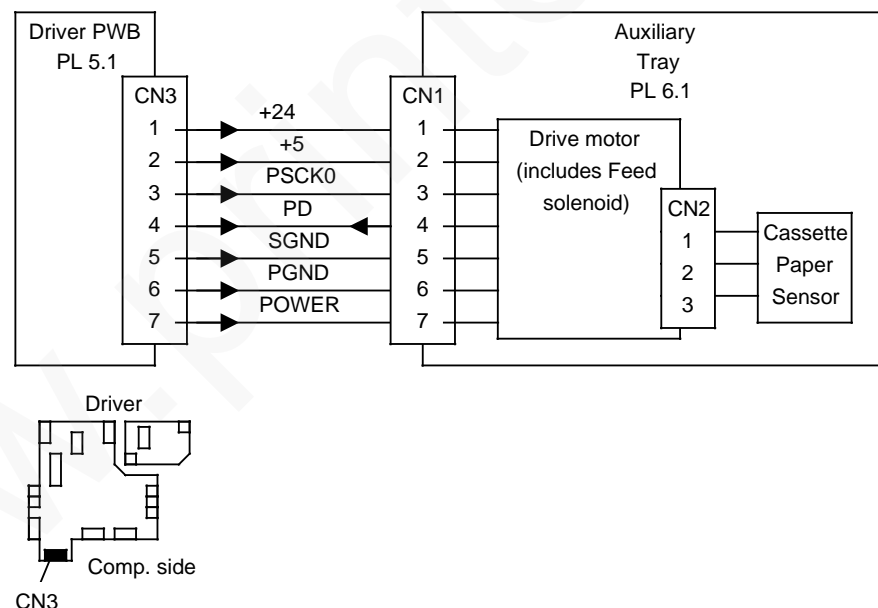


Figure 1. Auxiliary Tray

## RAP 63 Fans

### Initial Actions

- Check that the following connectors are fully seated:
  - Driver PWB CN13 (Fan)
  - Driver PWB is connected properly to the high voltage power supply.

### Procedure

1. Switch on the power.
2. Leave the machine in standby for at least 1 minute. System error lockup, code LB13, appears and the error LED begins to flash.

**Y N**

| Replace the driver PWB (REP 5.5).

3. Check the fan (rear) motor. (Figure 1)  
Switch off the power.  
Disconnect the driver PWB CN13.  
Measure the resistance across the pins of the fan harness.

- 2 K to 5 K ohms

**Y N**

| Replace the fan (REP 3.3).

4. Measure the voltage at the driver PWB to ground (figure 1).

- +24 VDC at CN1, pin 2.

**Y N**

| Go to RAP 11.

5. Measure the voltage at the driver PWB to ground (figure 1).

- +17 to +22 VDC at CN13, pin 1.

**Y N**

| Replace the driver PWB (REP 5.5).

6. Go to the procedure which directed you to this RAP or go to System Checkout.

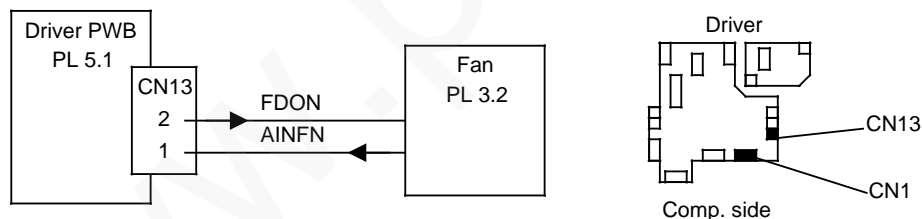


Figure 1. Fan control

## 3. Image Quality Repair Analysis Procedures

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### 3. Image Quality Repair Analysis Procedures

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#### Introduction

The Image Quality (IQ) section is used to identify image quality problems. It contains this Introduction, Image Quality samples, and Image Quality RAPS.

These samples are reproductions of the image quality of the internal test pattern (generated by the machine) and the test pattern 82P151 (copied on the machine).

Compare the quality of the samples produced in section 1, System Checks, with the image quality samples in this section. This will identify any image quality defects which may have been produced during Off-line or On-line System Checks.

Use the Image Quality RAPS to further diagnose machine problems.

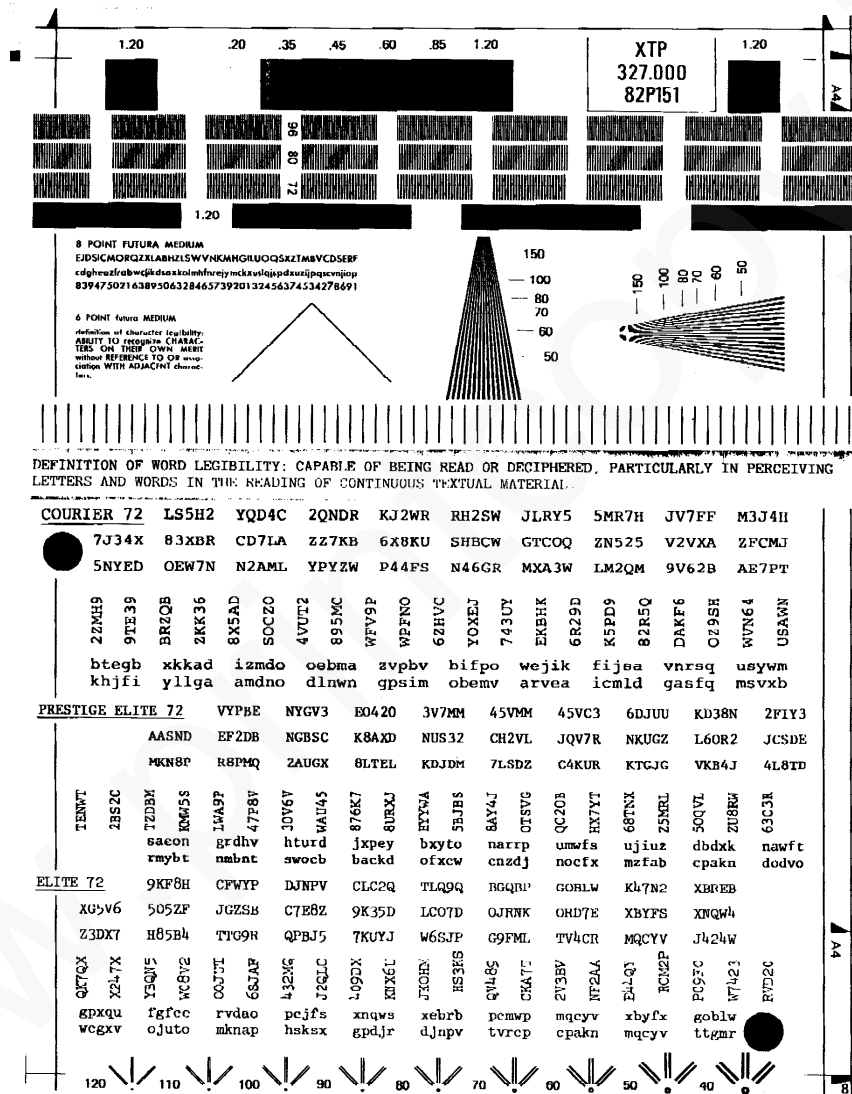
In the Y/N (Yes/No) steps of the RAPs, a Yes response will lead you to the next step. A No response will indicate a corrective action, or will direct you to another step. When the indicated corrective action has been completed, go to Section 1 and restart the System Check to verify that the problem has been corrected.

#### Test Points / Voltage Tolerances

Machine grounds, power and signal, are connected to the frame ground. Due to this condition all circuit troubleshooting can be performed using the machine chassis as the grounding point. If more information is needed to locate connectors or test points, please refer to section 7 of this manual.

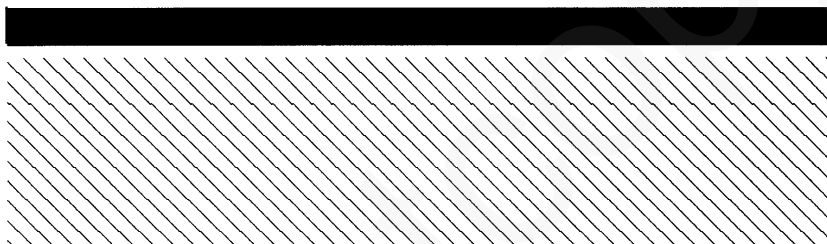
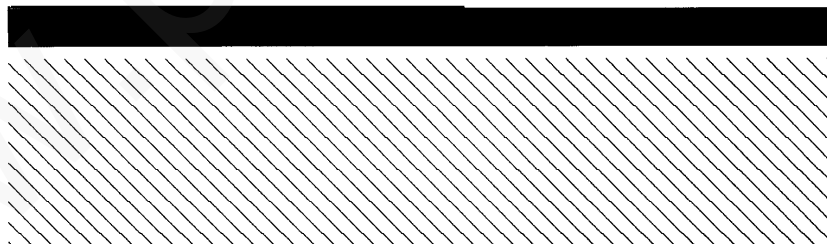
Unless specified otherwise, the following voltage tolerances are used within this section:

<u>Stated</u>	<u>Measured</u>
+ 5.0 VDC	+ 3.8 VDC to + 5.5 VDC
+ 24.0 VDC	+ 23.0 VDC to + 25.5 VDC
0.0 VDC	+ 0.5 VDC





## Internal Test Pattern

[illegible][illegible]

## IQ RAP 1 Entry Image Quality RAP

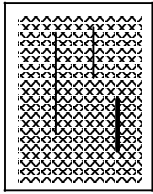
### Procedure

1. All inspection and cleaning procedures, as identified in section 1 (Subsystem Maintenance), have been completed.  
**Y N**  
 | Go to section 1 and perform Subsystem Maintenance.
2. Image quality samples, internal printer test and test pattern copies, were produced during System Checks in section 1.  
**Y N**  
 | Go to section 1 and perform System Checks.
3. Compare the above samples to the image quality samples in this section.
4. Image quality defects are evident.  
**Y N**  
 | Go to System Checks in section 1.
5. Read through the list of defects in table 1 and select the best description of the defect.
6. Go to the IQ RAP indicated in table 1.

Table 1. Image Quality Defects

Defect Definition	RAP
Dark vertical lines	IQ RAP 2
Dark horizontal lines	IQ RAP 3
Black copy	IQ RAP 4
Black spots	IQ RAP 5
Dark image or gray background	IQ RAP 6
Gray copy	IQ RAP 7
Gray horizontal band	IQ RAP 8
Vertical deletions	IQ RAP 9
Horizontal deletions	IQ RAP 10
Deleted spots	IQ RAP 11
Image not fused	IQ RAP 12
Blank copy	IQ RAP 13
Light image	IQ RAP 14
Uneven print	IQ RAP 15
Residual image	IQ RAP 16
Skew	IQ RAP 17
Registration	IQ RAP 18
Focus/blurred	IQ RAP 19
Black copy with white streaks	IQ RAP 20
Herringbone	IQ RAP 21
V-bars	IQ RAP 22
Reduced image size	IQ RAP 23
Received image quality is unacceptable	IQ RAP 24
Vertical Streaks (No text)	IQ RAP 25

## IQ RAP 2 Dark vertical lines

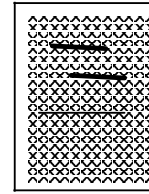


- Vertical lines/streaks on the page.
- Lines may be thick or thin.
- May repeat on every page.



- Vertical lines/streaks through the characters.

## IQ RAP 3 Dark horizontal lines



- Horizontal lines/streaks across the page.
- Lines may be thick or thin.
- May repeat on every page.



- Horizontal lines/streaks through the characters.

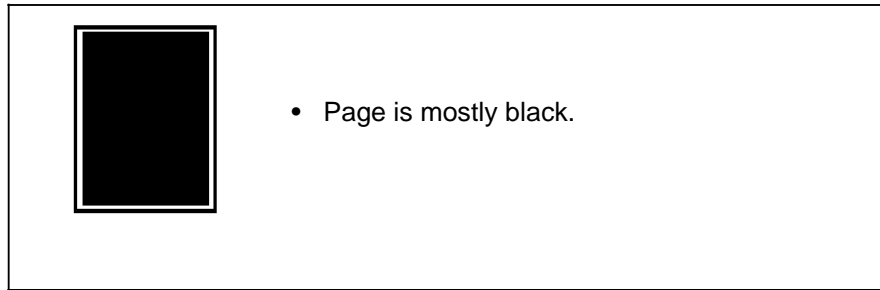
### Procedure

1. Defect occurs during an internal printer test.  
Y N  
| Replace the video module (REP 2.3).
2. Outside light is prevented from entering the machine.  
Y N  
| Relocate the machine, tighten the panels, reduce the amount of light entering the windows, or rotate the machine to reduce the amount of light entering the unit.
3. Image quality is acceptable.  
Y N  
| Replace the following parts in the order listed:
  - drum module
  - laser (REP 3.1)
4. Go to the procedure which directed you to this RAP or go to System Checkout.

### Procedure

1. The defects repeat at 2.99 inch (76 mm) vertical intervals on the page.  
Y N  
| Replace the drum module.
2. Replace the fuser assembly (REP 3.15).

## IQ RAP 4 Blackcopy



### Initial Actions

- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

### Procedure

1. Defect occurs during an internal printer test.

**Y N**

| Go to step 6.

2. The charge corotron wire is intact.

**Y N**

| Replace the drum module.

3. Check video data going to the driver PWB (Figure 1).  
Measure the driver PWB, CN2, pin 6 to ground.

- + 4.5 to 5.1 VDC during standby

**Y N**

| Replace the main PWB (REP 5.1).

4. Check video data going to the laser. (Figure 1)  
Measure the driver PWB, CN10, pin 8 to ground.

- + 3.2 to 3.6 VDC during standby

- + 2.0 to 2.4 VDC during printing

**Y N**

| Replace the driver PWB (REP 5.5).

5. Replace the following parts in the order listed:

- laser (REP 3.1)
- HV power supply (REP 5.8)

6. The video module LED lights during a copy operation.

**Y N**

| Go to step 8.

7. Replace the following parts in the order listed:

- Main PWB (REP 5.1)
- Video (CCD/LED) module (7041 W/O Tag 42) (REP 2.3).
- Video (CIS) (7042 & 7041 W/ Tag 42) (REP 2.12).

8. Check the LED drive signal (Figure 2).

Measure the following interconnect PWB pins to ground.

7041 W/O Tag 42: CN5, pins 1

7042 & 7041 W/ Tag 42: CN6, pins 10

- + 22.0 to 25.0 VDC during scanning

**Y N**

| Replace the main PWB (REP 5.1).

9. Replace the following parts:

- Video (CCD/LED) module (7041 W/O Tag 42) (REP 2.3).
- Video (CIS) (7042 & 7041 W/ Tag 42) (REP 2.12).

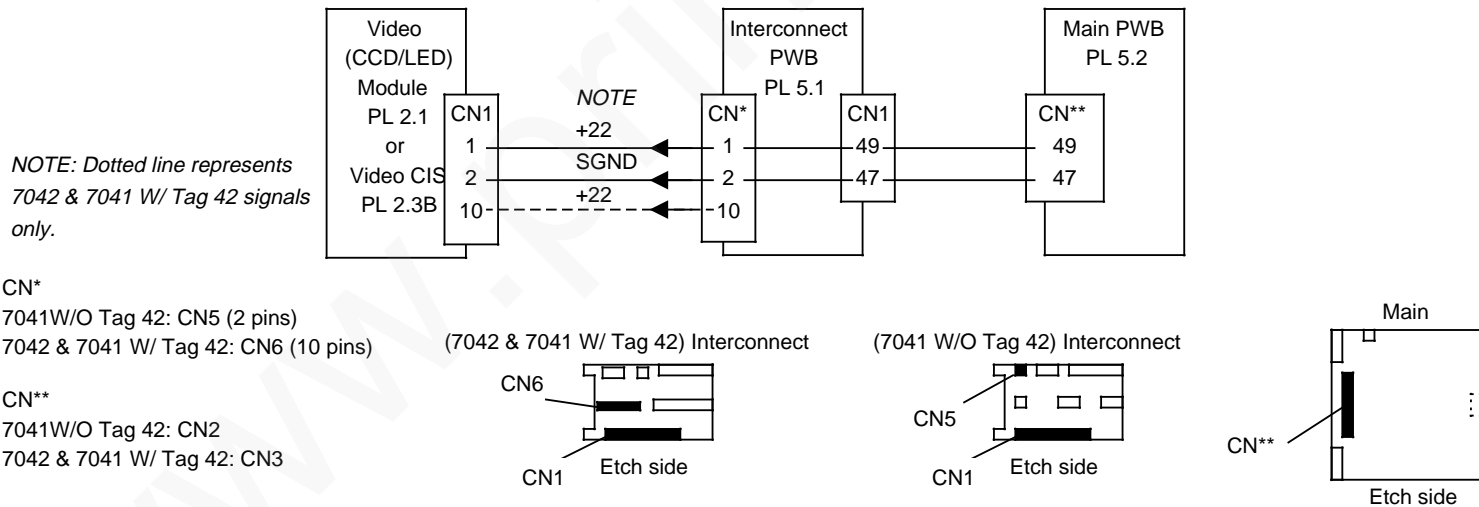
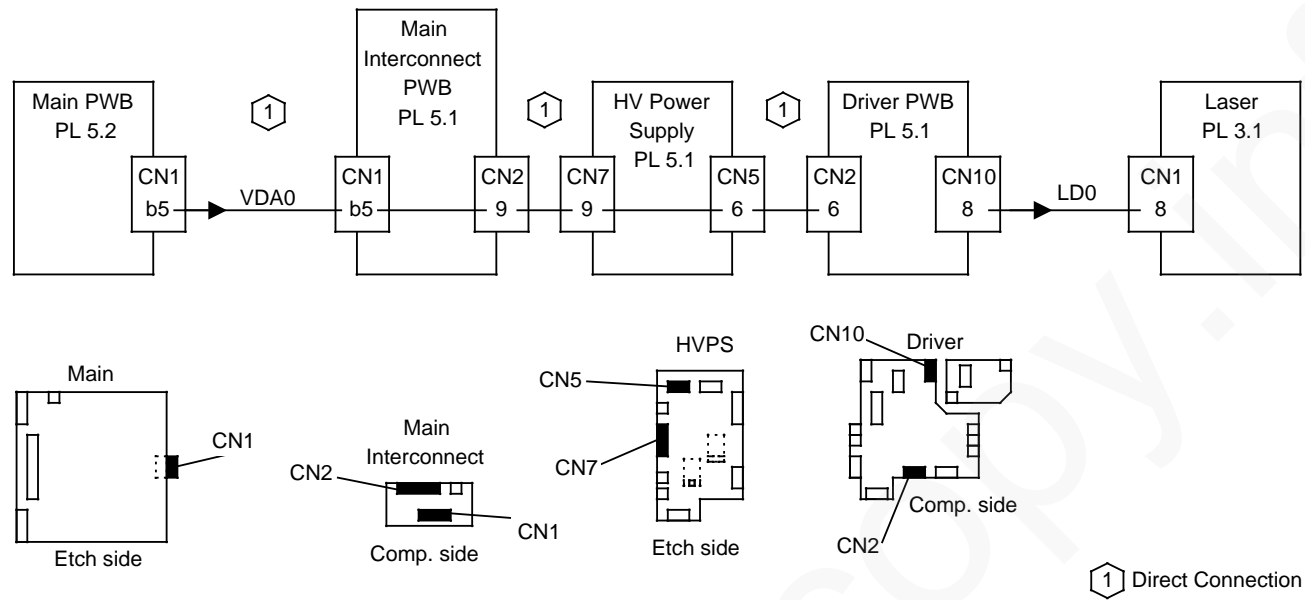
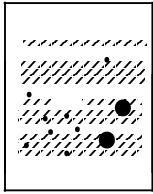
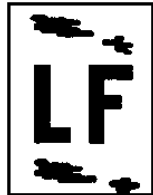


Figure 2. Scanner Video

## IQ RAP 5 Black spots

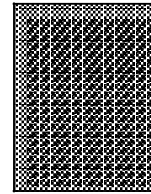


- Irregular spots on paper.
- Spots may be random on paper.
- May repeat on every page.

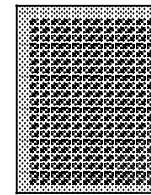


- Irregular spots around characters.

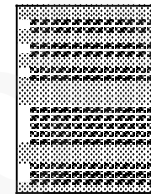
## IQ RAP 6 Dark image or gray background



- Characters/images are darker than normal and background is dirty.



- All of background is dirty.



- Background is dirty in areas of no image.

### Procedure

1. The defects are repeated at 3.78 inch (96 mm) vertical intervals on the page.

**Y N**

| Go to step 3.

2. Replace the drum module.
3. The defects are repeated at 2.99 inch (76 mm) vertical intervals on the page.

**Y N**

| Replace the developer assembly.

4. Replace the fuser assembly (REP 3.15).

### Procedure

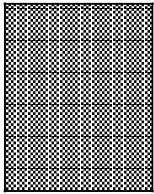
1. Inspect the magnetic roller bias contacts. Clean or repair as required. Copy quality is good.

**Y N**

| Replace the HV power supply (REP 5.8).

2. Go to the procedure which directed you to this RAP or go to System Checkout.

## IQ RAP 7 Gray copy

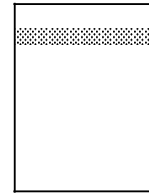


- Page is all gray and image cannot be read.

### Procedure

1. Replace the main PWB (REP 5.1).

## IQ RAP 8 Gray horizontal band



- Gray band across page, with light or no image.

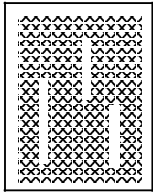
### Procedure

1. Check that the drum shaft is well grounded.  
Measure the resistance between either end of the drum (polished surface) and the machine chassis.
  - < 10 ohms

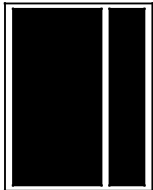
**Y N**

| Repair or clean the drum ground plate on the front frame, as necessary (Take care not to deform the plate, remove to reform).
2. Go to the procedure which directed you to this RAP or go to System Checkout.

## IQ RAP 9 Vertical deletions



- Irregular faded or blank areas down the page.
- May repeat on every page.

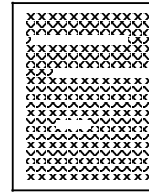


- Faded or deleted elements within solid black areas.

### Procedure

1. The copy paper is damp.  
Y N  
| Go to step 3.
2. Replace the paper supply.
3. Check the magnetic roller for an indication of the white line. Clean the magnetic roller as required.
4. Image quality is acceptable.  
Y N  
| Replace the developer assembly.
5. Go to the procedure which directed you to this RAP or go to System Checkout.

## IQ RAP 10 Horizontal deletions



- Irregular faded or blank areas across the page.
- May repeat on every page.



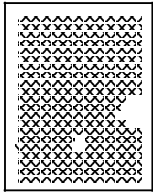
- Faded or deleted elements within solid black areas.

### Procedure

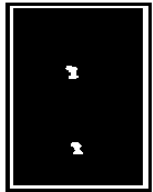
1. Replace the drum module.



## IQ RAP 11 Deleted spots



- Areas of characters or image are blurred/missing.
- Characters are smeared before they are fused.

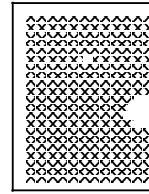


- Faded or deleted elements within solid black areas.

### Procedure

1. The copy paper is damp.  
**Y N**  
| Go to step 3.
2. Replace the paper supply.
3. The deletions are repeated at 3.78 inch (96 mm) vertical intervals on the page.  
**Y N**  
| Go to step 5.
4. Replace the drum module.
5. The deletions are repeated at 2.99 inch (76 mm) vertical intervals on the page.  
**Y N**  
| Go to step 7.
6. Replace the fuser assembly.
7. Replace the developer assembly.

## IQ RAP 12 Image not fused

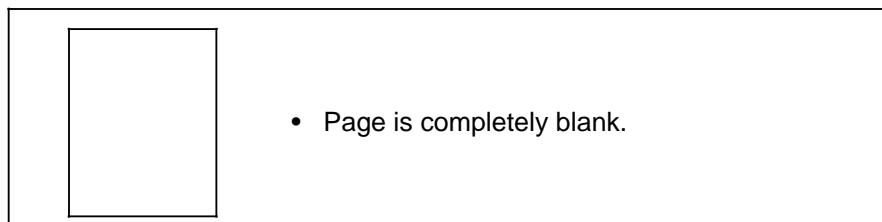


- Image rubs off.

### Procedure

1. The copy paper is damp.  
**Y N**  
| Go to step 3.
2. Replace the paper supply.
3. Check that the paper does not have a special coating.
4. Check that the fuser temperature is not set too low (ADJ 5.1).
5. Replace the toner supply.

## IQ RAP 13 Blank copy



### Procedure

1. Image is blank during an internal printer test.  
**Y N**  
| Go to step 13.
2. Open the top cover and cheat the interlock. The developer magnetic roller turns during power up.  
**Y N**  
| Go to step 5.
3. The transfer corotron wire is intact.  
**Y N**  
| Replace the corotron assembly (REP 3.10).
4. Go to step 9.
5. The developer assembly belt is in place.  
**Y N**  
| Replace or reinstall the belt, as required.
6. Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
7. Check the motor drive signals. (Figure 1)  
Measure the driver PWB, CN4, pins 1 and 2 to ground.
  - + 24.0 VDC during printing at pin 1
  - 0 VDC during printing at pin 2**Y N**  
| Replace the driver PWB (REP 5.5).
8. Replace the motor/sensor (REP 4.3).
9. Check that the drum shaft is well grounded.  
Measure the resistance between one end of the drum (polished surface) and the machine chassis.
  - < 10 ohms**Y N**  
| Repair or clean the drum ground plate on the front frame, as necessary (Take care not to deform the plate, remove to reform).
10. Check the laser clock and sync signals. (Figure 1)  
Measure the driver PWB, CN2, pins 7 and 8 to ground.
  - + 4.2 to 4.6 VDC during standby at pins 7 and 8
  - + 2.8 to 3.1 VDC during printing at pin 7
  - + 1.9 to 2.1 VDC during printing at pin 8**Y N**  
| Replace the driver PWB (REP 5.5).
11. Check the laser video signal. (Figure 1)  
Measure the driver PWB, CN2, pin 6 to ground.
  - + 4.6 to 5.0 VDC during standby**Y N**  
| Replace the main PWB (REP 5.1).
12. Replace the following parts in the order listed:
  - HV power supply (REP 5.8)
  - laser (REP 3.1)
  - drum module
13. Is this machine a 7041 W/O Tag 42.  
**Y N**  
| Go to step 16.
14. Check the CCD reset signal. (Figure 2)  
Measure the interconnect PWB, CN4, pin 2 to ground.
  - + .04 to .05 VDC during standby
  - + 1.20 to 1.35 VDC during scanning**Y N**  
| Replace the main PWB (REP 5.1).
15. Replace the video (CCD/LED) module (REP 2 .3).
16. Check the CIS clock signal.  
Measure the interconnect PWB, CN6, pin 8 to ground.
  - +2 to +4 VDC during standby and scanning**Y N**  
| Replace the main PWB (REP 5.1).

## IQ RAP 13 (continued)

17. Check the -12VDC signal.  
Measure the interconnect PWB, CN6, pin 4 to ground.
  - -12 VDC during standby and scanning

**Y N**  
| Replace the main PWB (REP 5.1).
18. Check the LED drive signal (figure 2).  
Measure the interconnect PWB, CN 6, pin 10 to ground.
  - +22 to +24 VDC during scanning.

**Y N**  
| Replace the main PWB (REP 5.1).
19. Check the Video out signal.  
Measure the interconnect PWB, CN 6, Pin 1 to ground.
  - +.6 VDC during standby.
  - +1.8 to 2.2 VDC during scanning

**Y N**  
| Replace the video (CIS) (REP 2.12).

Replace the main PWB (REP 5.1).

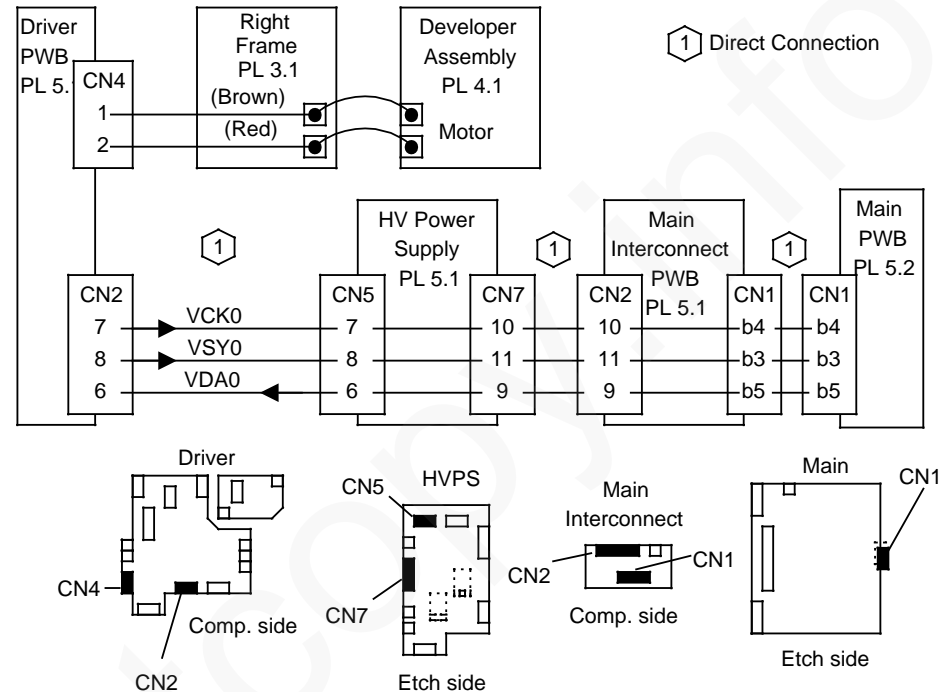


Figure 1. Print Video and Developer Drive

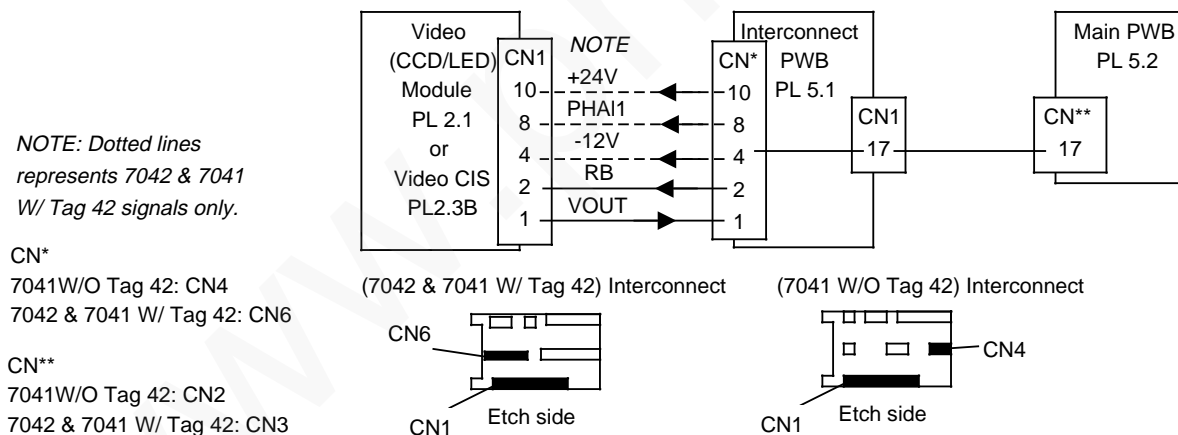
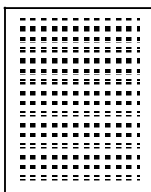


Figure 2. Scanner Reset Signal

## IQ RAP 14 Light image



- Some characters or areas are lighter than others.
- Entire page lighter than normal.

### Procedure

1. The copy paper is damp.  
**Y N**  
| Go to step 3.
2. Replace the paper supply.
3. This is a 7041 W/O Tag 42.  
**Y N**  
| Go to step 5.
4. Disconnect the density control harness at the in-line connector near the solenoid. Measure the resistance across the pins of the density control harness. (Figure 1)
  - Near 0 ohms with control rotated to the full counter clockwise direction
  - Near 9 K ohms with control rotated to the full clockwise direction**Y N**  
| Replace the density control (REP 3.6).
5. The transfer corotron wire is intact.  
**Y N**  
| Replace the corotron assembly (REP 3.10).
6. Check that the drum shaft is well grounded. Measure the resistance between one end of the drum (polished surface) and the machine chassis.
  - < 10 ohms**Y N**  
| Repair or clean the drum ground plate on the front frame, as necessary (Take care not to deform the plate, remove to reform).
7. Open the top cover and cheat the interlock. The developer magnetic roller turns during power up.  
**Y N**  
| Go to step 11.
8. Check the high voltage drive signals. (Figure 1) Remove the driver PWB shield and reconnect the setup PWB. Measure the driver PWB CN1, pins 14, 15, and 16 to ground.
  - +.70 to .95 VDC at pin 14, during printing
  - +.60 to .70 VDC at pin 15, during printing
  - +1.0 to 1.2 VDC at pin 16, during printing**Y N**  
| Replace the following parts in the order listed:
  - Driver PWB (REP 5.5).
  - HV power supply (REP 5.8).
9. Check the high voltage feedback signals. (Figure 1) Measure the driver PWB CN1, pins 11, 12, and 13 to ground.
  - +.70 to .90 VDC at pin 11, during printing
  - +1.1 to 1.2 VDC at pin 12, during printing
  - +.70 to .80 VDC at pin 13, during printing**Y N**  
| Replace the HV power supply (REP 5.8).
10. Replace the drum module.
11. The developer assembly belt is in place.  
**Y N**  
| Replace or reinstall the belt, as required.
12. Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.
13. Check the motor drive signals. (Figure 2) Measure the driver PWB, CN4, pins 1 and 2 to ground.
  - + 24.0 VDC during printing at pin 1
  - 0 VDC during printing at pin 2**Y N**  
| Replace the driver PWB (REP 5.5).
14. Replace the motor/sensor (REP 4.3).

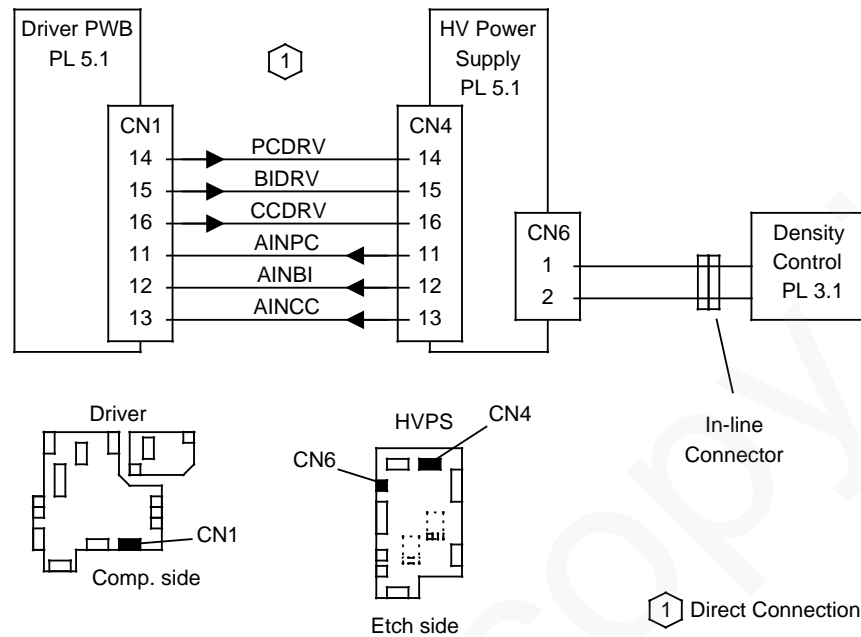


Figure 1. HV Drive and Feedback

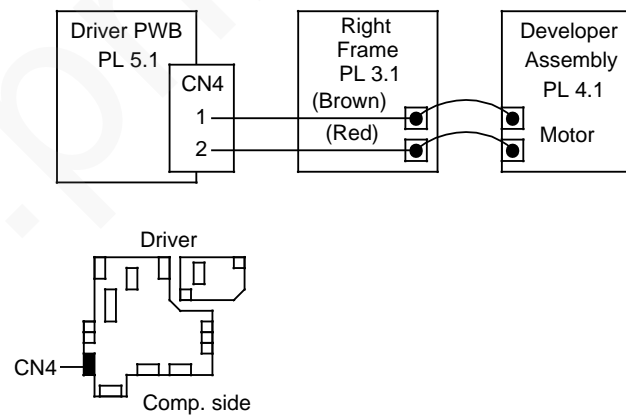


Figure 2. Developer Drive

## IQ RAP 15 Uneven print



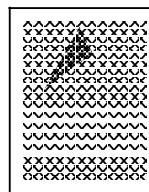
- Image density varies within the page. Defect is in horizontal bands across the page (strobings).

### Procedure

- Check that the machine is on a level surface.
- The defects are repeated at 3.78 inch (96 mm) vertical intervals on the page.  

Y	N
	Replace the developer assembly.
- Replace the drum module.

## IQ RAP 16 Residual image



- Areas of characters or image are repeated.

### Initial Actions

- Remove the driver PWB shield and reconnect the setup PWB to the driver PWB.

### Procedure

- Check the discharge LED drive signal. (Figure 1)  
 Measure the driver PWB, CN10, pin 12 to ground.
  - + 16.0 to 18.0 VDC during standby
  - + 12.0 to 14.0 VDC during printing

Y	N
	Replace the driver PWB (REP 5.5).
- Replace the drum module.

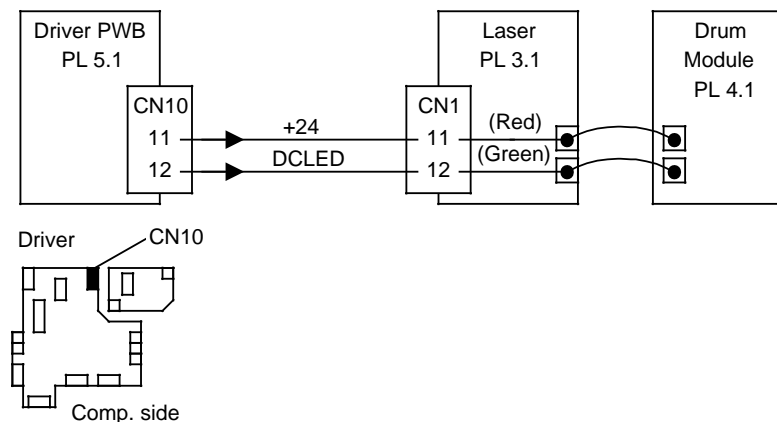
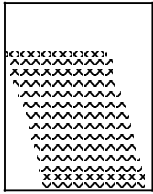


Figure 1. Discharge Lamp

## IQ RAP 17 Skew

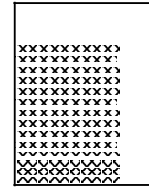


- Image is not perpendicular to edge of page.
- Margins are not straight.

### Procedure

1. Defect occurs during an internal printer test.  
**Y N**  
| Go to step 4.
2. Check that the paper is loaded properly in the cassette.
3. Check for paper path obstructions in the paper feed path.
4. Check that the control panel assembly is fully closed and the document tray guides are adjusted properly.
5. The documents skew or jam only when the document tray guides are fully open and documents are biased to the front or rear of the scanner. (This would include long edge feeding.)  
**Y N**  
| Go to RAP 60.
6. Go to REP 2.3 and check that the video module is properly.

## IQ RAP 18 Registration

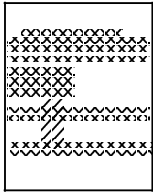


- Image is not properly positioned.
  - top to bottom.
  - side to side.
- Margins too wide or too narrow.

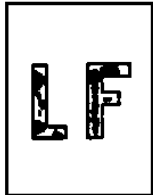
### Procedure

1. Image is registered correctly during an internal printer test.  
**Y N**  
| Go to step 5.
2. Check the ADF document guides for proper setting and that they are centered within the tray.
3. Perform a Sensor/Interlock test. The element relating to the scan sensor (third digit from the left) changes states as the document enters and exits the scanner.  
**Y N**  
| Replace the document sensor assembly (REP 2.4).
4. Replace the main PWB (REP 5.1).
5. Check the paper cassette guides for proper adjustment.
6. Perform print registration adjustment (ADJ 5.2).

## IQ RAP 19 Focus/blurred



- Image is not clear.



- Characters are unclear.

### Procedure

1. Image is blurred or out of focus during an internal printer test.

Y N

| Replace the video module (REP 2.3).

2. The copy paper is damp.

Y N

| Go to step 4.

3. Replace the paper supply.

4. The machine is sitting on a level surface.

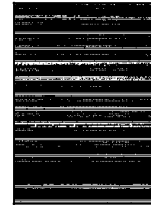
Y N

| Level the machine.

5. Replace the following parts in the order listed:

- drum module
- developer assembly

## IQ RAP 20 Black copy with white streaks



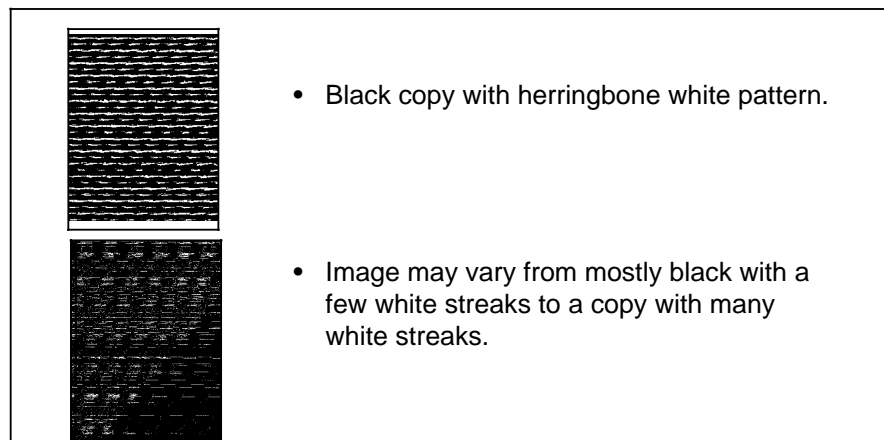
- Image is basically all black, with white horizontal streaks.

### Procedure

1. Replace the main PWB (REP 5.1).



## IQ RAP 21 Herringbone



### Procedure

1. Check that the interconnect PWB CN4 is fully seated.
2. Is this a 7041 W/O Tag 42 machine.  
**Y N**  
 | Go to step 4.
3. Check the video CCD level signal. (Figure 1)  
 Measure the interconnect PWB, CN4, pin 7 to ground.
  - + 6.5 VDC at power up , slowly dropping to + 3.90 VDC during standby
  - + 6.9 VDC during scanning**Y N**  
 | Replace the video module (REP 2.3).

4. Check the video output signal. (Figure 1)  
 Measure the interconnect PWB, pins to ground.

7041 W/O Tag 42, CN4, pin 1.

- + 3.9 VDC at power up , after stabilizing during standby
- + 6.9 VDC during scanning

7042 & 7041 W/ Tag 42, CN6, pin 1.

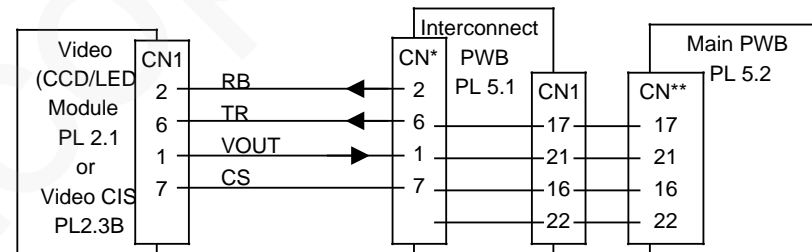
- +.6 VDC during standby.
- +1.8 to 2.2 VDC during scanning

**Y N**

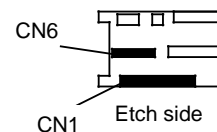
| Replace the following parts:

- Video (CCD/LED) module (7041 W/O Tag 42) (REP 2.3).
- Video (CIS) (7042 & 7041 W/ Tag 42) (REP 2.12).

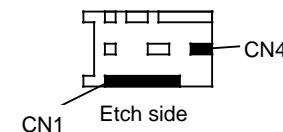
5. Replace the main PWB (REP 5.1).



(7042 & 7041 W/ Tag 42) Interconnect



(7041 W/O Tag 42) Interconnect



CN\*  
 7041W/O Tag 42: CN4  
 7042 & 7041 W/ Tag 42: CN6

CN\*\*  
 7041W/O Tag 42: CN2  
 7042 & 7041 W/ Tag 42: CN3

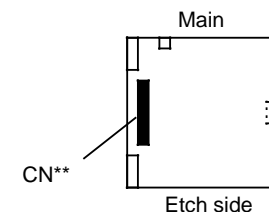
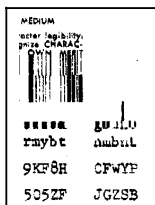


Figure 1. Scanner Video

## IQ RAP 22 V-bars

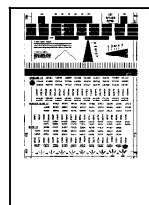


- Image is missing with black vertical lines or bars.
- Image is stretched top to bottom.

### Procedure

1. Transmit a document over a known good telephone line. Problem goes away or is reduced.  
**Y N**  
| Replace the following parts in the order listed:
  - LCU PWB (REP 5.3)
  - Main PWB (REP 5.1)
2. Have the customer request that the transmission line be tested or try transmitting at a different time of the day.

## IQ RAP 23 Reduced image size



- Image is reduced to approximately 75 percent, in a vertical and a horizontal direction.

### Description

This procedure applies to situations when the printed image is reduced and should not have been reduced.

### Initial Actions

- Check that the customer options and service parameters are set correctly.

### Procedure

1. Problem occurs on line in the receive mode.  
**Y N**  
| Go to step 4.
2. Problem occurs from several different transmitters.  
**Y N**  
| Go to step 5.
3. Replace the main PWB (REP 5.1).
4. Perform the steps of RAP 40 in section 2, that relate to the B4 sensor (steps 7 through 9).
5. Check the operation of the remote machine.

## IQ RAP 24      Received Image Quality is Unacceptable

### Procedure

1. Establish voice contact using the same telecommunication link as the transmitted document.
  - Line is not noisy and other voice can be heard clearly.**Y   N**
  - | Go to step 3.
2. Original document is clean and has no deletions.**Y   N**
  - | Have remote user send a clean document.
3. Have document sent at a slower transmit speed and with the fine resolution option selected. Refer to General Procedures for service controlled parameters, if required.
  - Image quality is acceptable.**Y   N**
  - | Go to step 5.
4. Inform user of required settings.
5. Telephone and line cables are connected properly.**Y   N**
  - | Reinstall the cables.
6. Verify both machines and the telecommunication link by transmitting between both machines over a known good link.
  - Both transmitted documents have acceptable image quality.**Y   N**
  - | Go to step 8.
7. Have user request that the telephone company verify the quality of the initial telecommunication link.

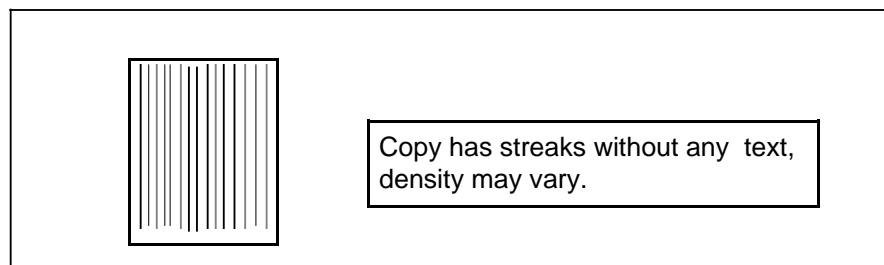
### CAUTION

*The following action will reset all selectable options, features, and customer data on the machine to their initial default conditions. Be sure to save all of the reports from initial actions, in section 1, so that the dial directory and other information can be entered again, if needed.*

*Another option is to compare the customer and the service parameter settings to the tables in chapter 6. Change the customer or the service settings to match the default settings in chapter 6. This will allow the original dial directory settings to remain unchanged. Go to step 9 for this option.*

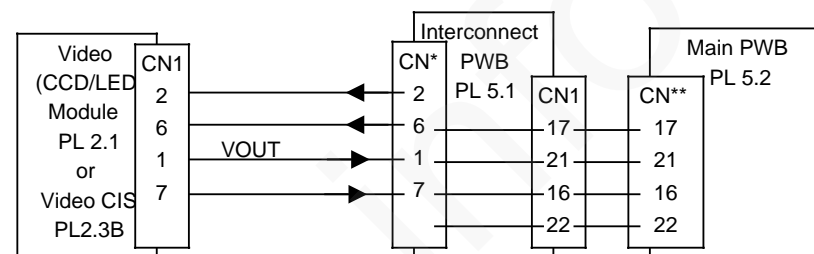
8. Perform a RAM initialization service test 13.
  - a. Press [Service].
  - b. Enter [1101] on the keypad.
  - c. Press [Start].
  - d. Enter [13] on the keypad.
  - e. Enter [1234] on the keypad.
9. Have the remote user send documents again.
  - Image quality is acceptable.**Y   N**
  - | Replace the following parts in the order listed:
    - LCU PWB (REP 5.3)
    - main PWB (REP 5.1)Transmit a document after each action to verify repair.
10. Verify that improper options have not been set on the machine. Set the options so they match the customers options as printed during the Initial Actions. Inform the user of any required changes.

## IQ RAP 25 Vertical Streaks (No Text)

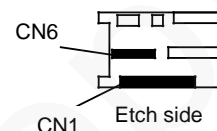


### Procedure

1. Check that connector CN 6 is seated properly.  
**Y N**  
 | Reseat connector.
2. Check the video output signal. (Figure 1)  
 Measure the interconnect PWB, pins to ground.  
 7041 W/O Tag 42, CN4, pin 1.  
 • + 3.9 VDC at power up , after stabilizing during standby  
 • + 6.9 VDC during scanning  
 7042 & 7041 W/ Tag 42, CN6, pin 1.  
 • +.6 VDC during standby.  
 • +1.4 to 2.2 VDC during scanning  
**Y N**  
 | Replace the following parts:  
 • Video (CCD/LED) module (7041 W/O Tag 42) (REP 2.3).  
 • Video (CIS) (7042 & 7041 W/ Tag 42) (REP 2.12).
3. Replace the main PWB (REP 5.1).



(7042 & 7041 W/ Tag 42) Interconnect



CN\*  
 7041W/O Tag 42: CN4  
 7042 & 7041 W/ Tag 42: CN6

CN\*\*  
 7041W/O Tag 42: CN2  
 7042 & 7041 W/ Tag 42: CN3

(7041 W/O Tag 42) Interconnect

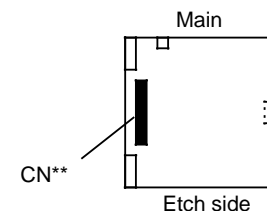
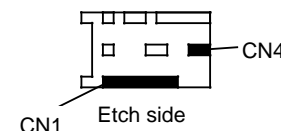


Figure 1. Scanner Video

## 4. Repair / Adjustment

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- REP 1.2 Top Cover [4-3](#)
- REP 1.3 Upper Right Cover [4-3](#)
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#### Scanner 7041 W/O Tag 42

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- REP 2.3 Video (CCD/LED) Module [4-7](#)
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- REP 2.5 Scanner Interlock [4-9](#)
- REP 2.6 Scan Motor [4-10](#)
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#### Scanner 7042 / 7042 W/ Tag 42

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#### 4. Repair / Adjustment

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- REP 5.2 EPROMS [4-31](#)
- REP 5.3 LCU PWB [4-31](#)
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#### 4. Repair / Adjustment

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## Introduction

### Organization

The Section Contents gives page references for all procedures in the repair section.

The repair section contains the removal and replacement procedures. If a part procedure cannot be found in this section, it means that removal or replacement is supported by the parts list, or that there is no requirement to remove the part.

### Removal

Removal contains step by step removal procedures for a specific part or assembly.

You should refer to the specific parts list illustration (listed under the repair title) for locating most parts within a procedure.

### Replacement

Replacement contains procedures to reinstall or replace a part or assembly.

If a replacement can be completed in the exact reverse order of the removal, a generic replacement statement is provided.

If you are in one replacement procedure and are directed to go to another procedure to reinstall a part, reinstall that part then return to the original procedure. The original procedure provides the best sequence for replacing each part removed.

### Adjustment

A purpose and a check for each adjustment is listed before the procedure.

## REP 1.1 Control Panel Assembly

### Parts List on PL 1.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the document tray (PL 1.1).

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- a. Press down on front and rear sides of the document tray near the control panel from the top side.
- b. Rotate the right side of the tray to an upward position.
- c. Separate the tray from the scanner module.

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- a. Lift up on the front and rear sides of the document tray near the control panel.

3. Remove the document exit tray (PL 1.1).

#### CAUTION

*Exposing the drum surface directly to light will decrease drum sensitivity.*

4. Remove the developer assembly and place the assembly into a black bag.
5. Open the control panel assembly and remove the two screws retaining the control panel assembly to the upper scanner assembly (figure 1).
6. Slide the control panel lever towards the rear of the machine to remove (figure 1).
7. Disconnect the control panel harness connector (CN1).
8. Remove the control panel assembly.

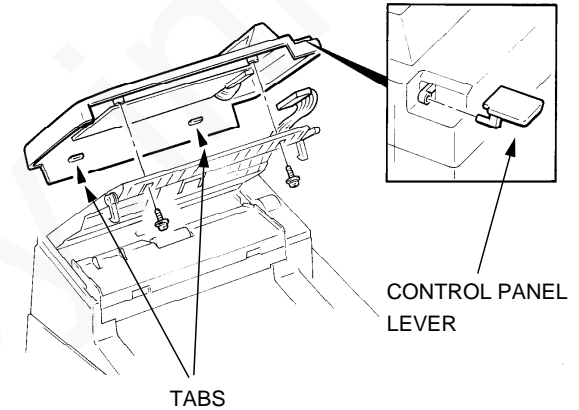


Figure 1. Control panel assembly

#### Replacement

*NOTE: Ensure the tabs on the control panel assembly are inserted to the upper scanner assembly and that the lever arm on the upper scanner assembly aligns properly with the cover.*

1. Reinstall in reverse order.



## REP 1.2 Top Cover

### Parts List on PL 1.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the two screws retaining the top cover to the chassis located at the left side of the machine (figure 1).
4. Open the top cover and remove the two screws securing the top cover to the upper printer assembly (figure 2).

**NOTE:** Be careful not to break panel lever arm when removing the top cover. You may need to open the upper scanner to gain clearance.

5. Remove the top cover.

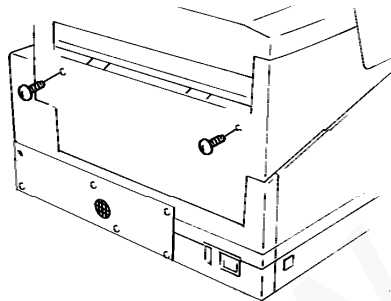


Figure 1. Top cover (left side)

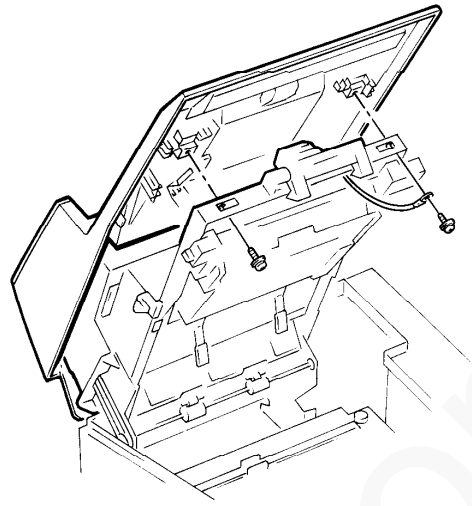


Figure 2. Top cover

#### Replacement

1. Reinstall in reverse order.

## REP 1.3 Upper Right Cover

### Parts List on PL 1.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.

#### CAUTION

*Exposing the drum surface directly to light will decrease drum sensitivity.*

2. Remove the developer assembly and place the assembly into a black bag.
3. Remove the handset and cradle.
  - a. Pull out on the rivet pins to release the cradle rivets.
4. Open the top cover and remove the screw retaining the upper right cover to the rear cover (figure 1).
5. Release the catch located towards the front of the machine (figure 1).
6. Remove the upper right cover.

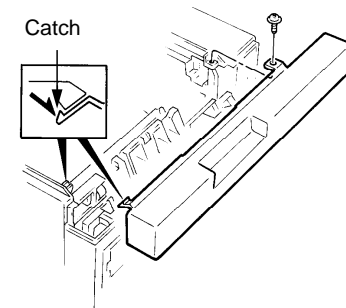


Figure 1. Upper right cover

#### Replacement

1. Reinstall in reverse order.

## REP 1.4 Lower Right Cover

### Parts List on PL 1.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the paper cassette.
3. Remove the upper right cover (REP 1.3).
4. Remove the three screws retaining the lower right cover to the chassis (figure 1).
5. Remove the lower right cover (figure 1).
  - a. Tilt the lower part of the cover out away from the machine, then lift up.

#### Replacement

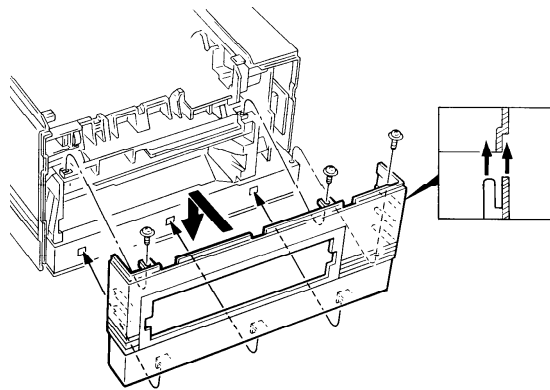


Figure 1. Lower right cover

1. Reinstall in reverse order.

## REP 1.5 Left Cover

### Parts List on PL 1.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover assembly (REP 1.2).
3. Loosen the two screws retaining the PWB chassis. (figure 1).
4. Remove the two screws retaining the left cover to the chassis (figure 2).
5. Remove the left cover.
  - a. Tilt out the upper part of the cover away from the machine, then lift up.

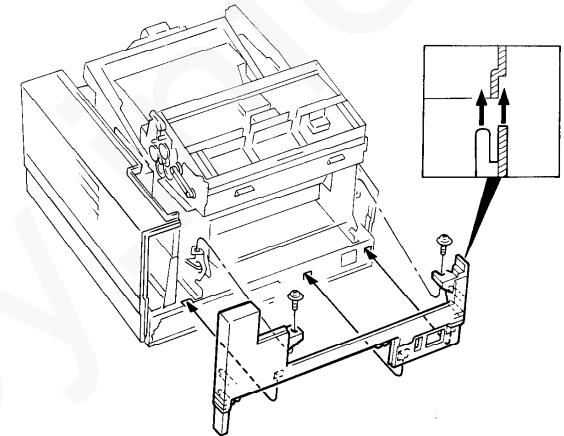


Figure 2. Left cover

#### Replacement

1. Reinstall in reverse order.

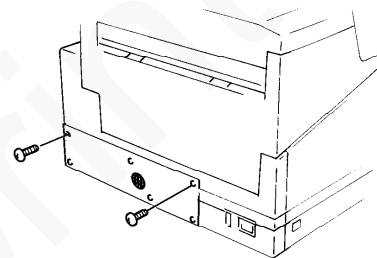


Figure 1. PWB chassis

## REP 1.6 Front/Rear Covers

### Parts list on PL 1.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the paper cassette, document tray and the document exit tray.

#### CAUTION

*Exposing the drum surface directly to light will decrease drum sensitivity.*

3. Remove the developer assembly and place the assembly into a black bag.
4. Remove the fuser pad.
5. Remove the handset and cradle.
  - a. Pull out on the rivet pins to release the cradle rivets.
6. Remove control panel assembly (REP 1.1).
  - a. Remove the control panel lever.
  - b. Open the control panel assembly and remove the two screws retaining the control panel assembly to the upper scanner assembly.
  - c. Disconnect the control panel harness connector (CN1).
  - d. Remove the control panel assembly.

7. Remove the top cover (REP 1.2).
  - a. Remove the two screws retaining the top cover to the chassis located at the left side of the machine.
  - b. Open the top cover and remove the two screws securing the top cover to the upper printer assembly.
  - c. Remove the top cover.
8. Remove the upper right cover (REP 1.3).
  - a. Remove the screw retaining upper right cover to the rear cover.
  - b. Release the catch located towards the front of the machine
  - c. Remove the upper right cover.
9. Remove the lower right cover (REP 1.4).
  - a. Remove the paper cassette.
  - b. Remove the three screws retaining the lower right cover to the chassis.
  - c. Remove the lower right cover.
10. Remove the left cover (REP 1.5).
  - a. Remove the two screws retaining the PWB Chassis to the chassis.
  - b. Remove the two screws retaining the left cover to the chassis.
  - c. Remove the left cover.
11. Remove the front and rear covers (figure 1).
  - a. Tilt the upper part of the covers out away from the machine, then lift up.

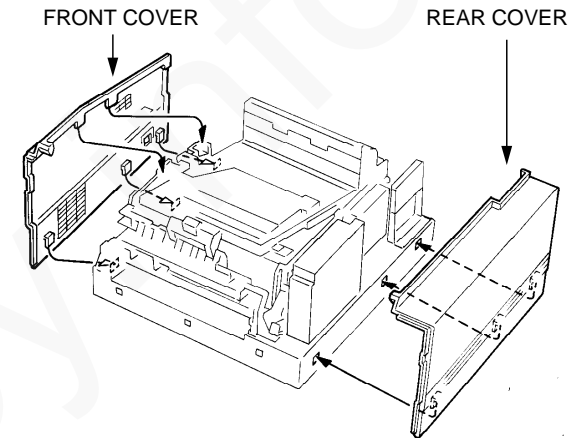


Figure 1. Front/Rear covers

#### Replacement

1. Reinstall in reverse order.

## REP 2.1 Scanner Module

Refer to PL 1.1 (Not spared)

### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the screw retaining the interconnect PWB to the chassis. Position the PWB to enable access to the connectors (PL 5.1).
4. 7041 W/O Tag 42:  
Disconnect the six connectors on the interconnect PWB.  
  
7042 and 7041 W/ Tag 42 :  
Disconnect the five connectors on the interconnect PWB.
5. Remove the four screws retaining the scanner module to the chassis (figure 1).
6. Remove the scanner module (figure 1).
  - a. Lift the scanner module and feed the wire harnesses through the hole in the chassis.

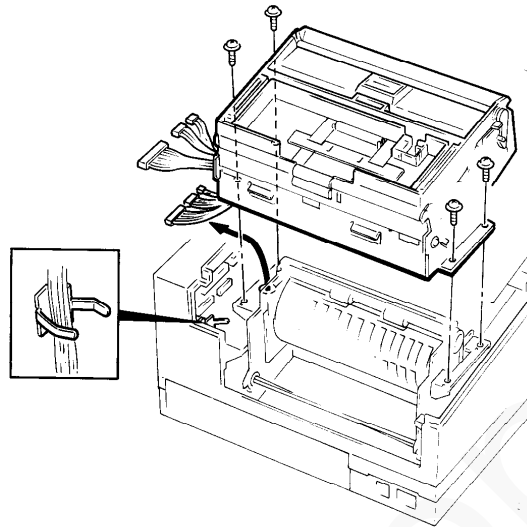


Figure 1. Scanner module

### Replacement

*NOTE: Ensure the wires are routed properly and reinstall cable ties to prevent damage to the wires.*

1. Reinstall in reverse order.

## REP 2.2 Retard Pad (7041 W/O Tag 42)

Parts List on PL 2.2A

### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the control panel assembly (REP 1.1).
3. Pull out on the rivet pins, located on the backside of the retard pad.
4. Remove the two plastic rivets retaining the retard pad and spring. (figure 1).
5. Remove the retard pad.

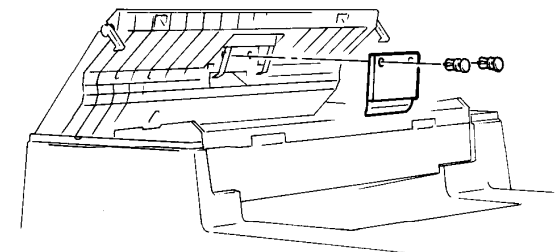


Figure 1. Retard pad

### Replacement

1. Reinstall in reverse order.

## REP 2.3 Video (CCD/LED) Module (7041 W/O Tag 42)

### Parts List on PL 2.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the paper guide (figure 1).
  - a. Press up slightly on the plastic tabs to release the tabs.
  - b. Slide the paper guide away from the scanner module.
5. Loosen the two stopper screws, allowing the upper scanner to swing completely open (figure 2).
6. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Lift up the side of the guide towards the front of the machine, then slide the guide away from the chassis.
  - c. Set to the side of the chassis.
7. Remove the shield (figure 2).
  - a. Remove the two screws retaining the shield to chassis.
8. Remove the video (CCD/LED) module (figure 3).
  - a. Loosen the CCD (oversize) screw.
  - b. Open the cable clamp.
  - c. Slide the module from the two spring clamps and locating pin.

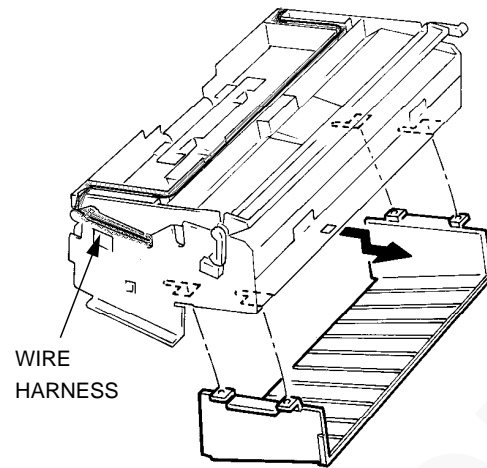


Figure 1. Paper guide

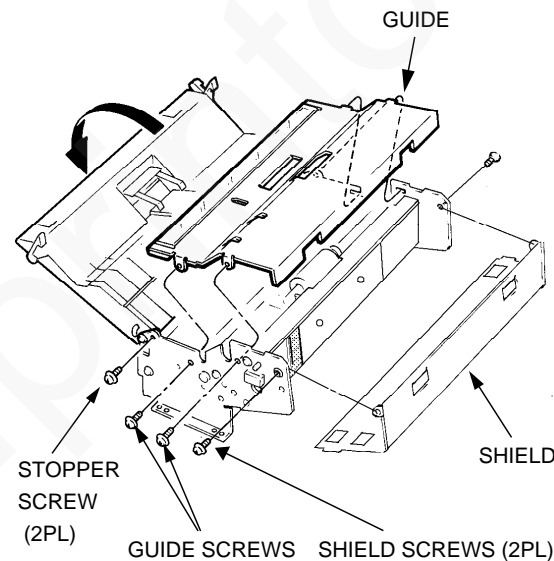


Figure 2. Guide/Shield

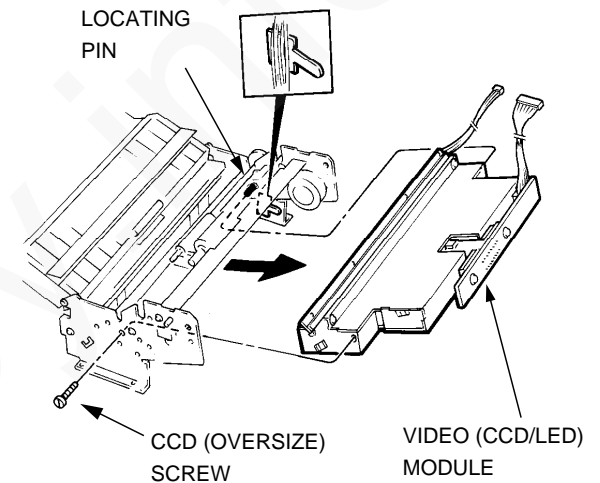


Figure 3. Video (CCD/LED) module

#### Replacement

##### NOTES:

- Place the edge of the LED array in the frame and ensure module is positioned on the locating pin.
- Ensure that the stack guide is positioned between the exit roller and the idler rollers before closing the upper scanner (PL 2.2).
- Ensure that the wire harness is routed properly.
- Do not retighten the CCD (oversize) screw until the last step to allow for proper alignment.

1. Reinstall in reverse order.

## REP 2.4 Document Sensors (7041 W/O Tag 42)

### Parts List on PL 2.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the paper guide (figure 1).
  - a. Press up slightly on the plastic tabs to release the tabs.
  - b. Slide the paper guide forward away from the scanner module.
5. Remove document sensor harness from the clamps.
6. Release the two clips which hold the sensor PWB (figure 2).
7. Loosen the two stopper screws, allowing the upper scanner to swing completely open (figure 3).
8. Remove the guide (figure 3).
  - a. Remove the two screws (figure 3).
  - b. Lift up the side of the guide towards the front of the machine, then slide the guide away from the chassis.
9. Remove the document sensors (figure 4).

#### CAUTION

*When straightening the locking tabs, use care not to break the spot welds (figure 4).*

- a. Straighten the metal locking tabs using pliers.
- b. Remove the sensors.

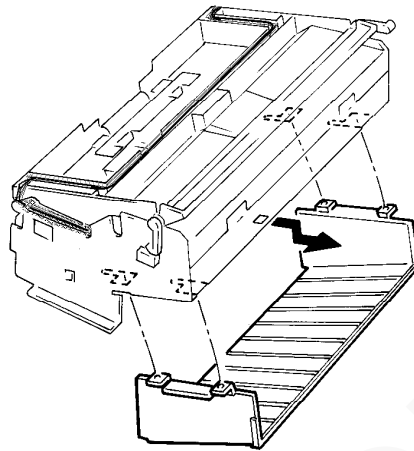


Figure 1. Paper guide

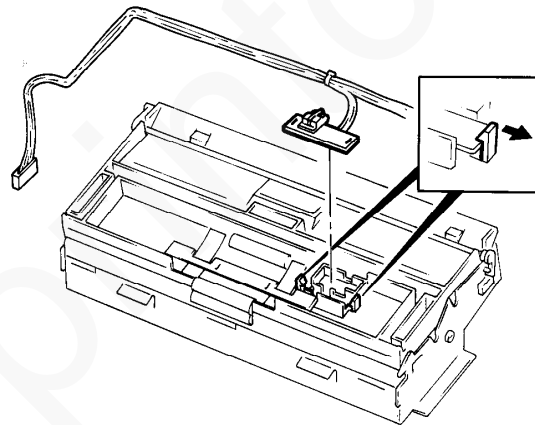


Figure 2. Sensor PWB

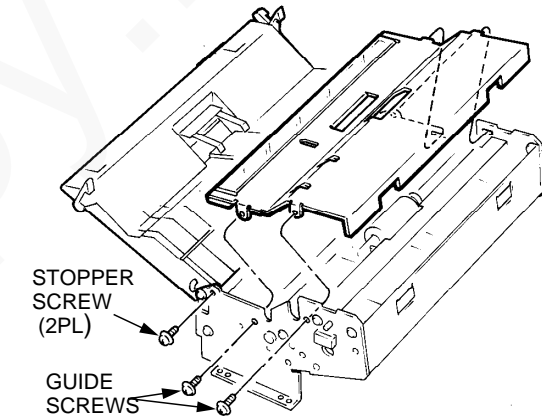


Figure 3. Guide

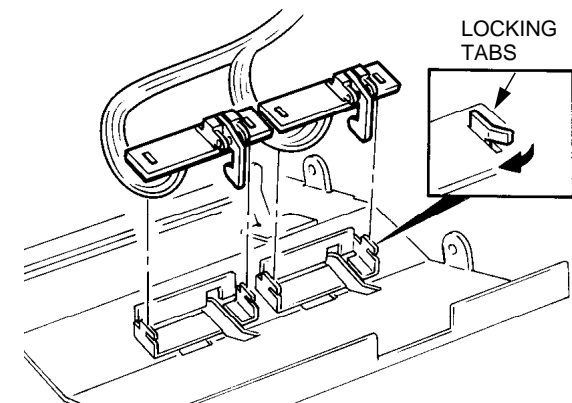


Figure 4. Document sensors/tabs

#### Replacement

*NOTE: Ensure that the stack guide is positioned between the exit roller and the idler rollers before closing the upper scanner (PL 2.2).*

1. Reinstall in reverse order.

## REP 2.5 Scanner Interlock (7041 W/O Tag 42)

### Parts List on PL 2.3A

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the scanner module (REP 2.1).
3. Release the sensor harness from the clamp.
4. Remove the screw retaining the interlock to the chassis (figure 1).
5. Remove the scanner interlock (figure 1).

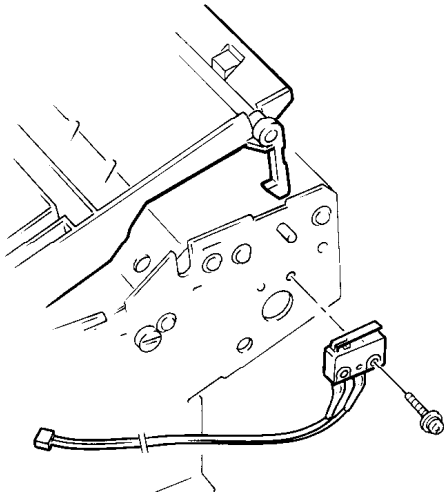


Figure 1. Scanner interlock

#### Replacement

1. Reinstall in reverse order.



## REP 2.6 Scan Motor (7041 W/O Tag 42)

### Parts List on PL 2.3A

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the paper guide (figure 1).
  - a. Press up slightly on the plastic tabs to release the tabs.
  - b. Slide the paper guide forward away from the scanner module.
5. Loosen the two stopper screws, allowing the upper scanner to swing completely open (figure 2).
6. Remove the guide.
  - a. Remove the two screws (figure 2).
  - b. Lift up the side of the guide towards the front of the machine, then slide the guide away from the chassis.
7. Remove the shield.
  - a. Remove the two screws retaining the shield (figure 2).
8. Remove the E-ring retaining the idler gear and remove idler gear (PL 2.3).
9. Remove the two screws retaining the scan motor to the rear frame (figure 3).
10. Remove the scan motor.

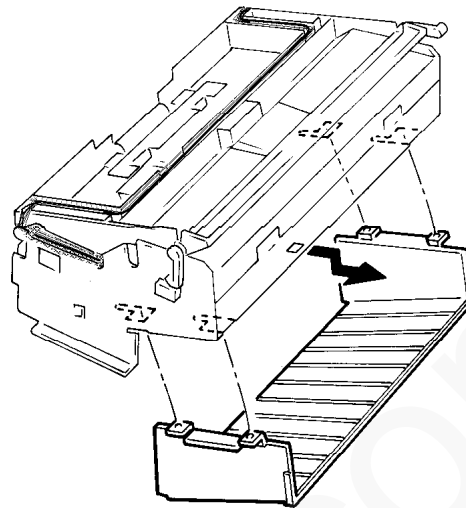


Figure 1. Paper guide

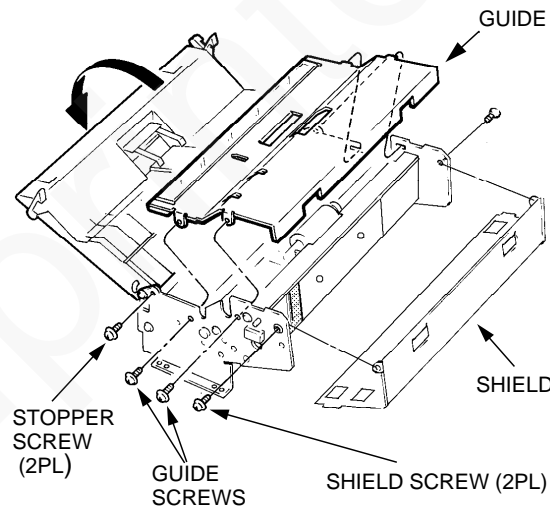


Figure 2. Guide/Shield

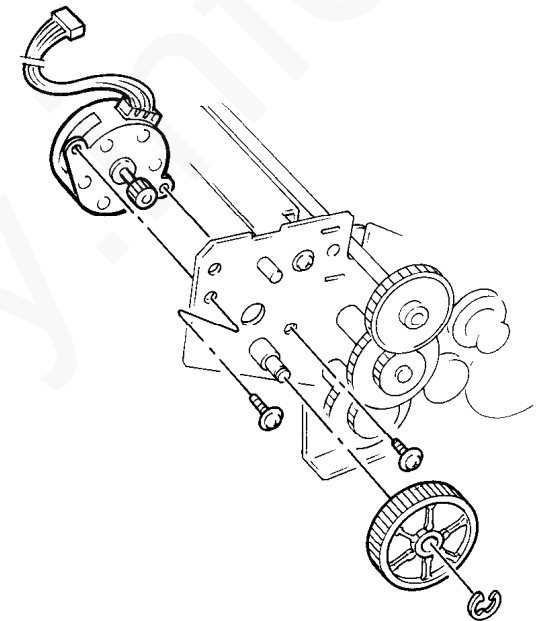


Figure 3. Scan motor

#### Replacement

**NOTE:** Ensure that the stack guide is positioned between the exit roller and the idler rollers located on the upper scanner assembly before closing the upper scanner (PL 2.2).

1. Reinstall in reverse order.



## REP 2.7 Feed Roller (7041 W/O Tag 42)

### Parts List on PL 2.3A

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Loosen the two stopper screws, allowing the upper scanner to swing completely open (figure 1).
4. Remove the guide (figure 1).
  - a. Remove the two screws.
  - b. Lift up the side of the guide towards the front of the machine, then slide the guide away from the chassis.
5. Remove the belt from the feed roller assembly (figure 2).
6. Remove the feed roller.

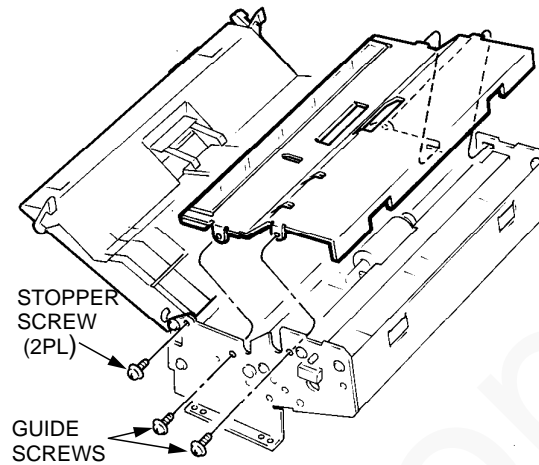


Figure 1. Guide

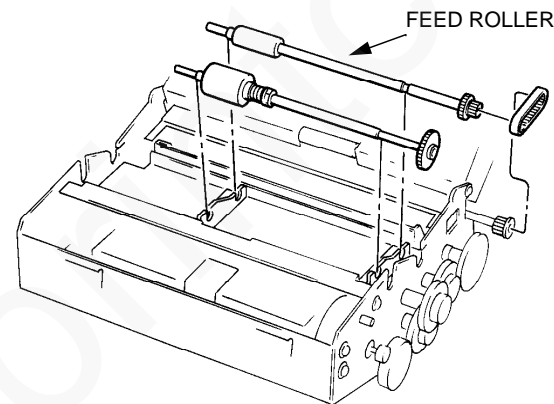


Figure 2. Feed roller

#### Replacement

*NOTE: Ensure that the stack guide is positioned between the exit roller and the idler rollers located on the upper scanner assembly before closing the upper scanner (PL 2.2).*

1. Reinstall in reverse order.

## REP 2.8 ADF Roller (7041 W/O Tag 42)

### Parts List on PL 2.3A

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Loosen the two stopper screws, allowing the upper scanner to swing completely open (figure 1).
4. Remove the guide (figure 1).
  - a. Remove the two screws (figure 1).
  - b. Lift up the side of the guide towards the front of the machine, then slide the guide away from the chassis.
5. Remove the ADF roller (figure 2).

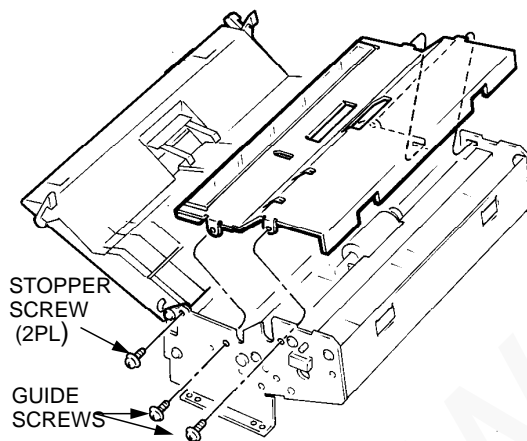


Figure 1. guide

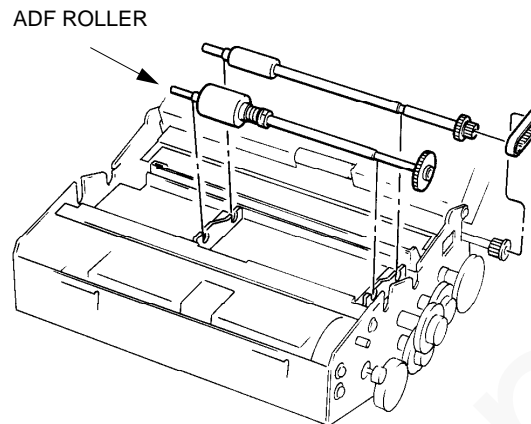


Figure 2. ADF roller

#### Replacement

**NOTE:** Ensure that the guide is positioned between the exit roller and the idler rollers located on the upper scanner assembly before closing the upper scanner (PL 2.2).

1. Reinstall in reverse order.

## REP 2.9 Exit Roller Assembly (7041 W/O Tag 42)

### Parts List on PL 2.3A

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Open the upper scanner.
4. Remove the four screws retaining the Upper scanner to the scanner module (figure 1).
5. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Lift up the side of the guide towards the front of the machine, then slide the guide away from the chassis.
6. Remove the roller guide (figure 1).
7. Remove the belt from the exit roller assembly (figure 1).
8. Remove the exit roller assembly (figure 1).

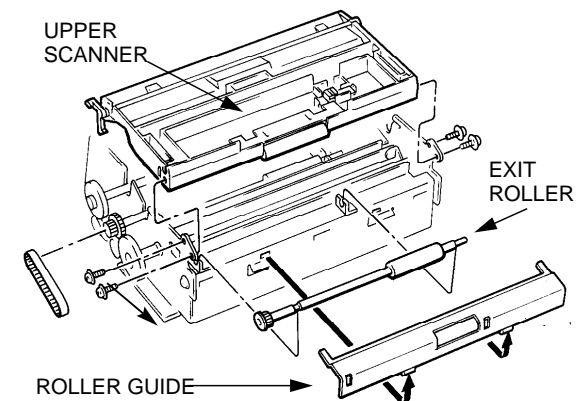


Figure 1. Exit Roller Assembly

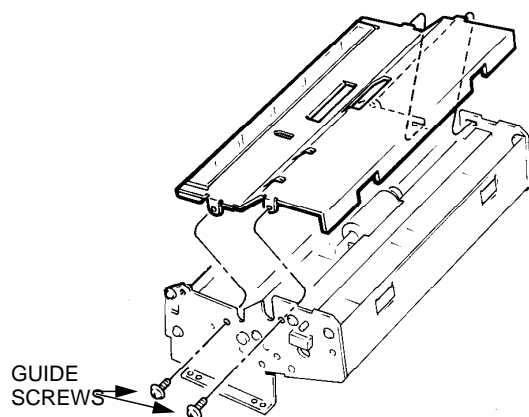


Figure 2. Guide

### Replacement

**NOTE:** Ensure that the stack guide is positioned between the exit roller and the idler rollers located on the upper scanner assembly before closing the upper scanner (PL 2.2).

1. Reinstall in reverse order.

## REP 2.10 Retard Pad (7042/7041 W/ Tag 42)

### Parts List on PL 2.2B

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the two plastic rivets retaining the retard pad. (figure 1).
4. Remove the retard pad.

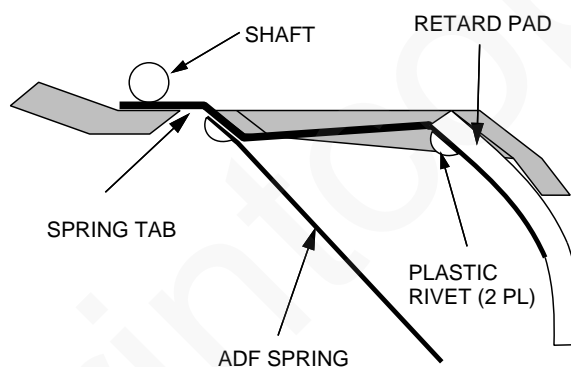


Figure 1. Retard pad

#### Replacement

1. Reinstall the retard pad and spring with the spring tab located under the ADF spring and under the shaft (figure 1).
2. Reinstall the remaining parts in the reverse order.

## REP 2.11 Platen Roller (7042/7041 W/ Tag 42)

### Parts List on PL 2.3C

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Loosen the the two stopper screws allowing the upper scanner to swing completely open (figure 1).
4. Lift the platen roller from the machine.

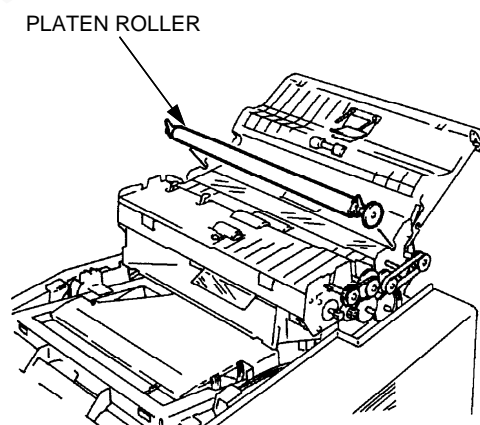


Figure 1. Platen roller

#### Replacement

1. Reinstall in reverse order.

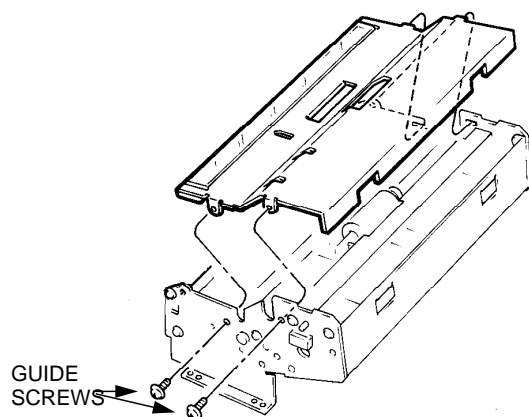


Figure 2. Guide

### Replacement

**NOTE:** Ensure that the stack guide is positioned between the exit roller and the idler rollers located on the upper scanner assembly before closing the upper scanner (PL 2.2).

1. Reinstall in reverse order.

## REP 2.10 Retard Pad (7042/7041 W/ Tag 42)

### Parts List on PL 2.2B

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the two plastic rivets retaining the retard pad. (figure 1).
4. Remove the retard pad.

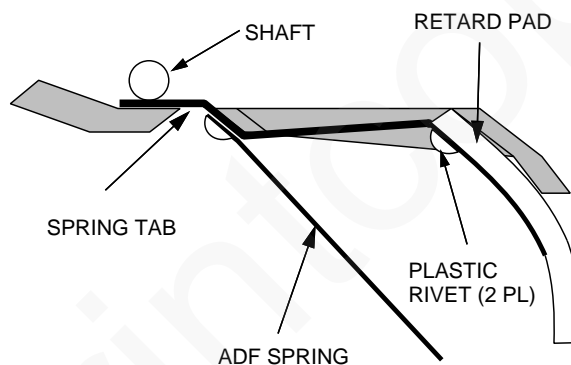


Figure 1. Retard pad

#### Replacement

1. Reinstall the retard pad and spring with the spring tab located under the ADF spring and under the shaft (figure 1).
2. Reinstall the remaining parts in the reverse order.

## REP 2.11 Platen Roller (7042/7041 W/ Tag 42)

### Parts List on PL 2.3C

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Loosen the the two stopper screws allowing the upper scanner to swing completely open (figure 1).
4. Lift the platen roller from the machine.

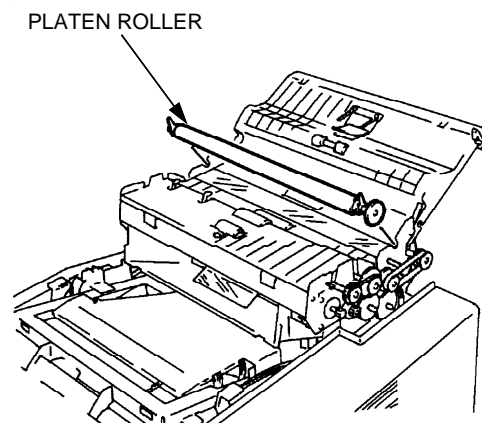


Figure 1. Platen roller

#### Replacement

1. Reinstall in reverse order.

## REP 2.12 Video (CIS) (7042/7041 W/ Tag 42)

### Parts List on PL 2.3B

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the upper scanner (figure 1).
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
4. Remove the platen roller (REP 2.11)
5. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

*The document sensor wires are attached to the guide. Use care not to damage the wires in the next step.*

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
6. Disconnect the connector from the Video (CIS) (figure 3).
  7. Remove the screw from the (CIS) mounting bracket.
  8. Remove the (CIS).

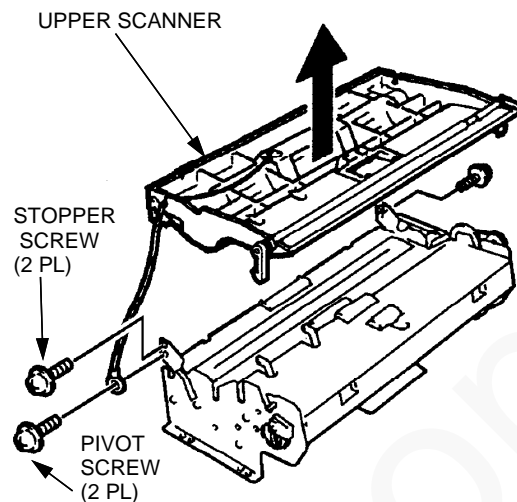


Figure 1. Upper scanner

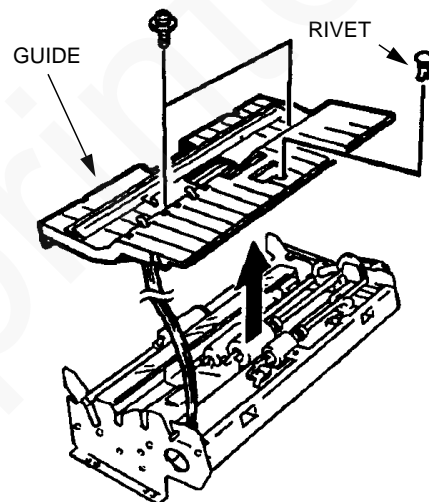


Figure 2. Guide

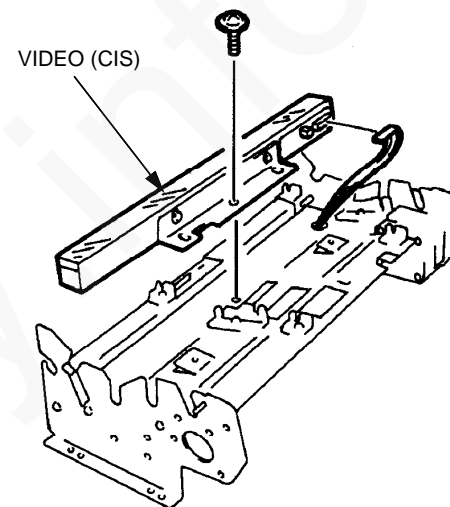


Figure 3. Video (CIS)

#### Replacement

1. Place the edge of the Video (CIS) in the frame and position it against the two locating pins at the left side of the machine.
2. Secure the mounting bracket screw.
3. Reinstall the remaining components in the reverse order.

## REP 2.13 Document Sensors (7042/7041 W/ Tag 42)

### Parts List on PL 2.3B

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the paper guide (figure 1).
  - a. Remove the two screws at the rear of the paper guide.
  - b. Slide the paper guide until the mounting tab clears the chassis.
5. Remove the upper scanner (figure 2).
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
6. Remove the platen roller (REP 2.11)
7. Remove the guide (figure 3).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

The document sensors wires are attached to the guide. Use care not to damage the wires in the next step.

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
8. Remove the shield (REP 2.15, step 8).
  9. Remove document sensor harness from the cable clamps.

**CAUTION**  
Carefully release the sensor PWBs from the plastic mounting tabs. The tabs may break if care is not taken.

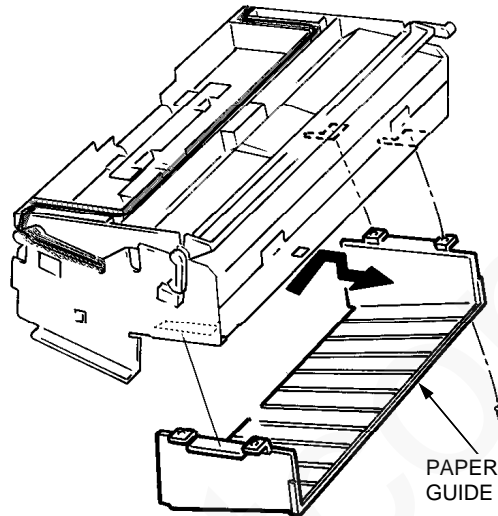


Figure 1. Paper guide

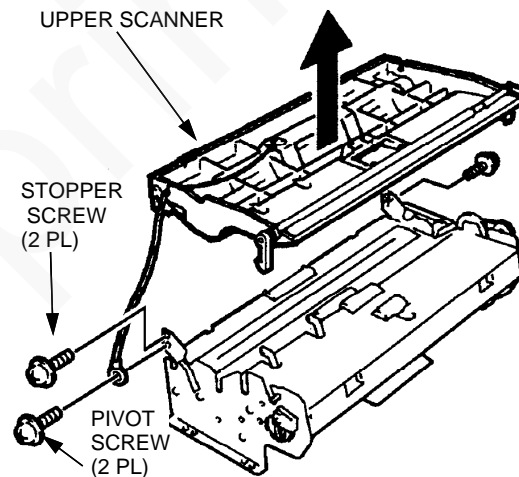


Figure 2. Upper scanner

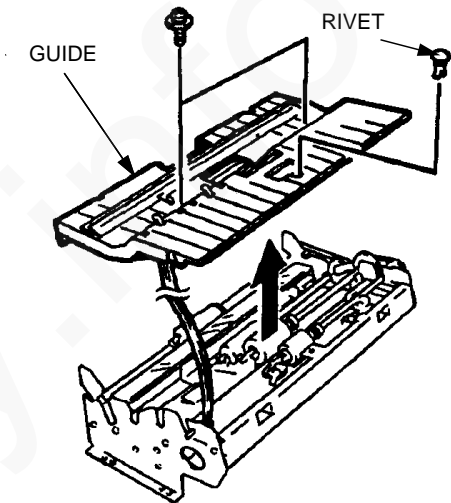


Figure 3. Guide

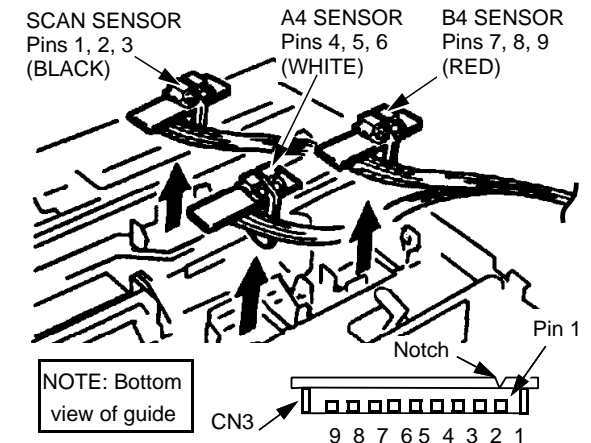


Figure 4. Document sensors

#### Replacement

1. Refer to figure 4 to install the sensors. Color codes or pin locations can be used to install the sensors in the correct locations.
2. Perform the sensor test (section 6).
3. Reinstall the remaining components in the reverse order.

## REP 2.14 Scanner Interlock (7042/7041 W/ Tag 42)

### Parts List on PL 2.3B

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the scanner module (REP 2.1).
3. Release the sensor harness from the clamp.
4. Remove the screw retaining the interlock to the chassis (figure 1).
5. Remove the scanner interlock ).

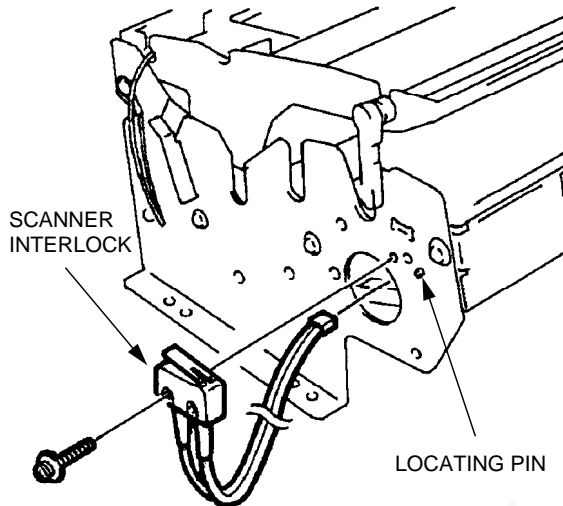


Figure 1. Scanner interlock

#### Replacement

##### CAUTION

*For proper operation, the scanner interlock must be installed onto the locating pin on chassis in the position shown (figure 1).*

1. Reinstall the remaining components in the reverse order.



## REP 2.15Scan Motor (7042/7041 W/ Tag 42)

### Parts List on PL 2.3B

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the paper guide (figure 1).
  - a. Remove the two screws at the rear of the paper guide.
  - b. Slide the paper guide until the mounting tab clears the chassis.
5. Remove the upper scanner (figure 2) .
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
6. Remove the platen roller (REP 2.11)
7. Remove the guide (REP 2.13 Step 7).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

*The document sensors wires are attached to the guide. Use care not to damage the wires in the next step.*

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
8. Remove the shield.
  - a. Remove the five screws retaining the shield (figure 3).
9. Remove the scan motor wires from the harness

10. Remove the three screws retaining the scan motor to the rear frame (figure 4).

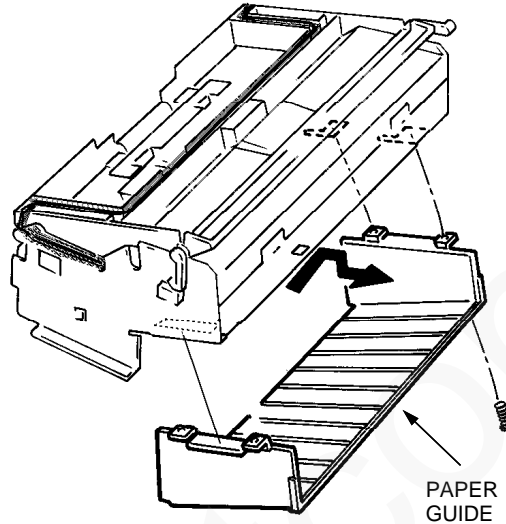


Figure 1. Paper guide

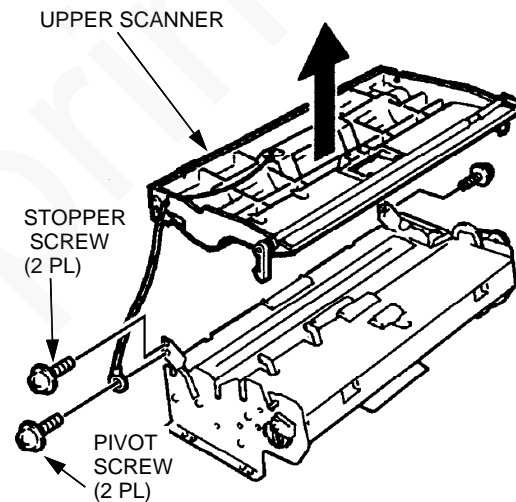


Figure 2. Upper Scanner

#### Replacement

1. Install the scan motor with the wire harness connector toward the left side.
2. Reinstall the remaining components in the reverse order.

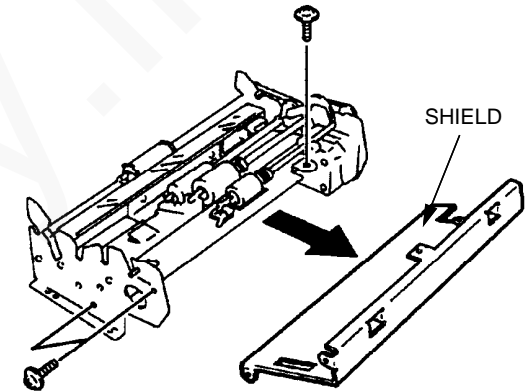


Figure 3. Shield

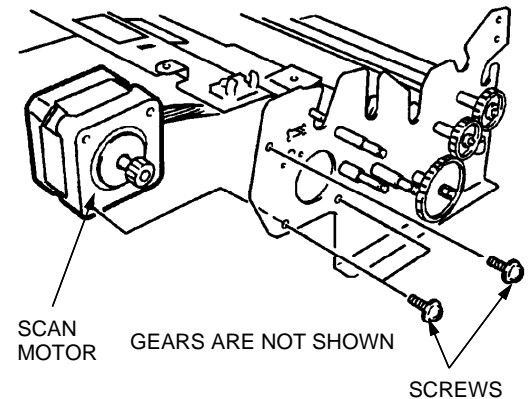


Figure 4. Scan motor



## REP 2.16 Pre-Feed Roller (7042/7041 W/ Tag 42)

### Parts List on PL 2.3C

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the upper scanner (figure 1) .
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
4. Remove the platen roller (REP 2.11)
5. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

*The document sensors wires are attached to the guide. Use care not to damage the wires in the next step.*

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
6. Lift the pre-feed roller to release it from the shaft supports (figure 3).
  7. Remove the drive belt from the pre-feed roller assembly.

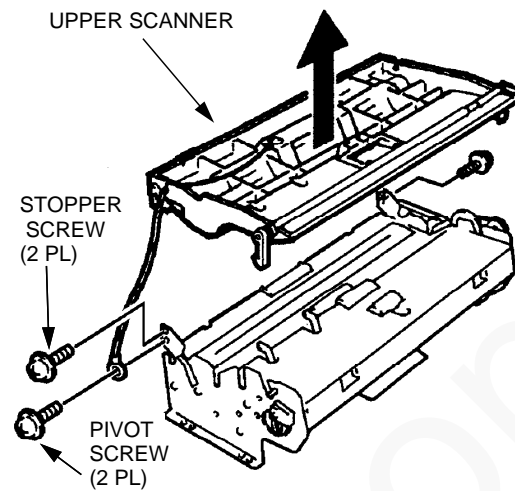


Figure 1. Upper scanner

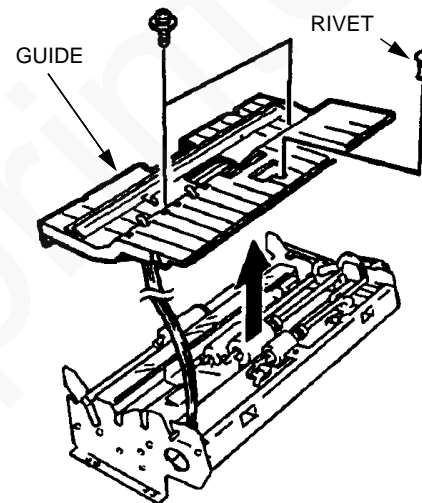


Figure 2. Guide

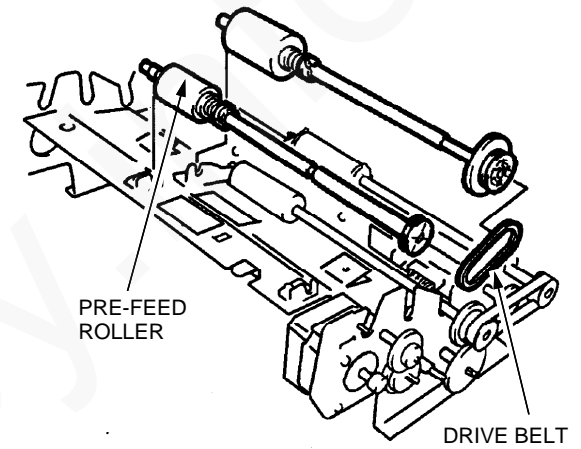


Figure 3. Pre-feed Roller

#### Replacement

1. Install in reverse order

## REP 2.17 Feed Roller (7042/7041 W/ Tag 42)

### Parts List on PL 2.3C

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the upper scanner (figure 1) .
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
4. Remove the platen roller (REP 2.11)
5. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

*The document sensors wires are attached to the guide. Use care not to damage the wires in the next step.*

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
6. Lift the feed roller to release it from the shaft supports (figure 3).
  7. Remove the timing belt from the feed roller assembly.

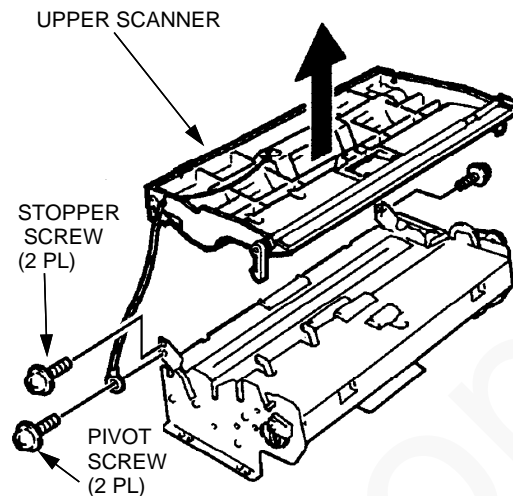


Figure 1. Upper scanner

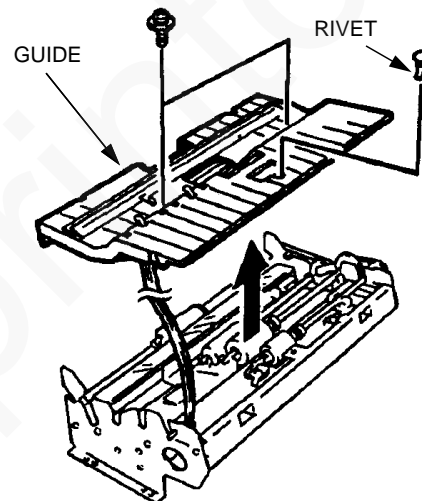


Figure 2. Guide

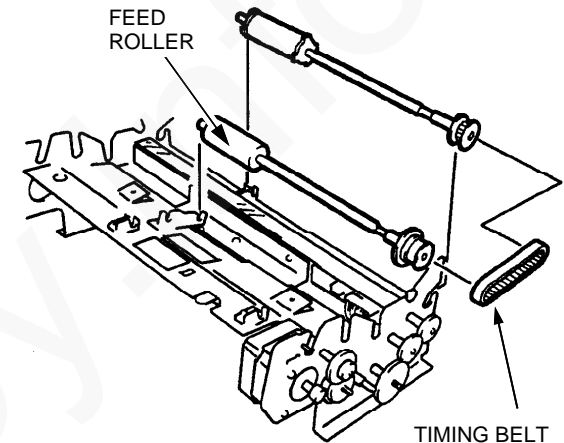


Figure 3. Feed Roller

#### Replacement

1. Install in reverse order

## REP 2.18 ADF Roller (7042/7041 W/ Tag 42)

### Parts List on PL 2.3C

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the upper scanner (figure 1).
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
4. Remove the platen roller (REP 2.11)
5. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

*The document sensors wires are attached to the guide. Use care not to damage the wires in the next step.*

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
6. Lift the ADF roller to release it from the shaft supports (figure 3).
  7. Remove the drive belt from the ADF roller assembly.

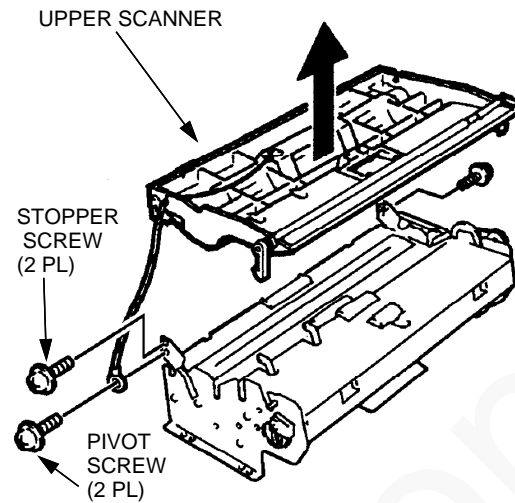


Figure 1. Upper scanner

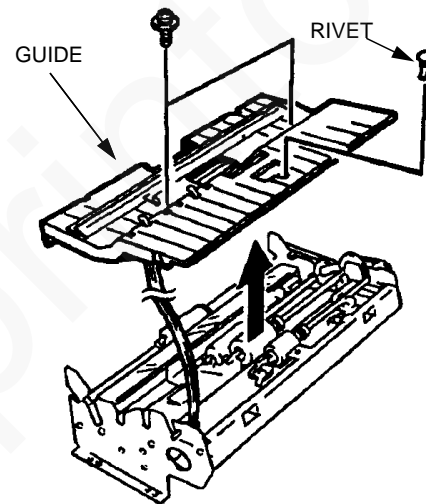


Figure 2. Guide

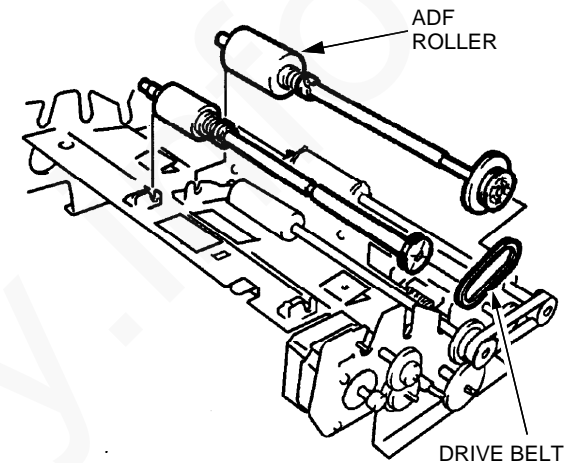


Figure 3. ADF roller

#### Replacement

1. Reinstall in reverse order.

## REP 2.19 Exit Roller (7042/7041 W/ Tag 42)

### Parts List on PL 2.3C

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover (REP 1.2).
3. Remove the upper scanner (figure 1).
  - a. Remove the two pivot screws and the two stopper screws retaining the upper scanner to the chassis.
4. Remove the platen roller (REP 2.11)
5. Remove the guide (figure 2).
  - a. Remove the two screws.
  - b. Remove the plastic rivet.

#### CAUTION

*The document sensors wires are attached to the guide. Use care not to damage the wires in the next step.*

- c. Pull slightly on the left side of the guide to release the four mounting tabs and lift the guide toward the front of the machine.
  - d. Set the guide to the side of the chassis.
6. Lift the exit roller to release it from the shaft supports (figure 3).
  7. Remove the timing belt from the exit roller assembly.

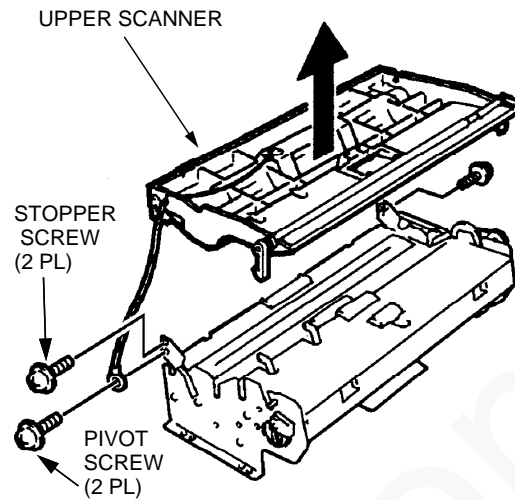


Figure 1. Upper scanner

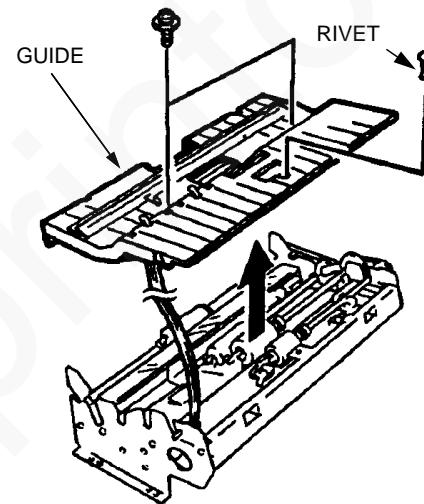


Figure 2. Guide

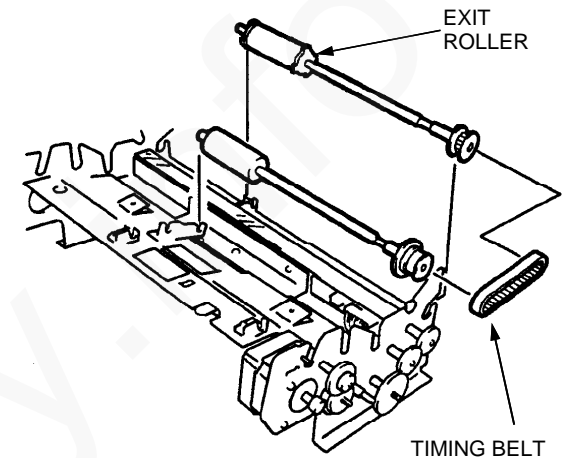


Figure 3. Exit roller

#### Replacement

1. Reinstall in reverse order.

## REP 3.1 Laser

### Parts List on PL 3.1



#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the document tray assembly.
3. Open the top cover assembly.

#### CAUTION

*Exposing the drum surface directly to light will decrease drum sensitivity.*

4. Remove the developer assembly and place the assembly into a black bag.
5. Disconnect the connector at the laser (figure 1).
6. Remove the ground wire from the laser.
7. Remove the two screws retaining the laser to the chassis (figure 1).
8. Remove the laser.

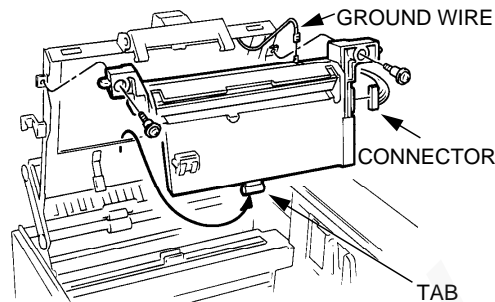


Figure 1. Laser

#### Replacement

1. Reinstall in reverse order.
2. Install charge scorotron shield (PL 3.1).
3. Perform the print registration adjustment (ADJ 5.2).

## REP 3.2 Print Motor

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).

#### CAUTION

*Removing the main chassis from the bottom cover will expose the PWBs. Follow electrostatic discharge precautions.*

3. Remove the setup PWB (REP 5.6).
4. Remove the driver PWB (REP 5.5).
5. Remove the two screws retaining the print motor to the chassis (figure 1).
6. Remove the print motor.

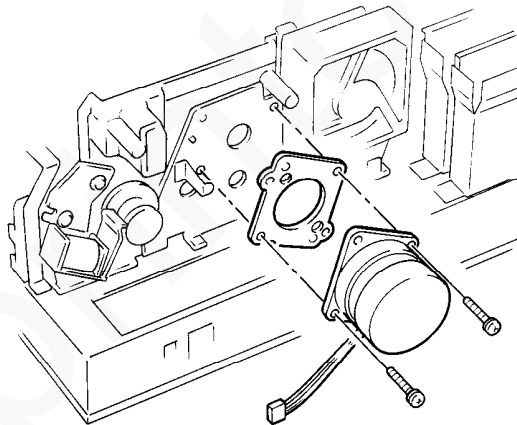


Figure 1. Print motor

#### Replacement

1. Reinstall in reverse order.

## REP 3.3 Fan

### Parts List on PL 3.2

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Disconnect the fan connector (CN13) on the driver PWB.
4. Release the fan and housing by pushing up on the locking tab, located at the bottom of the fan (figure 1).
5. Release the left and right tabs of the fan cover.
6. Remove the fan cover (PL 3.2).
7. Remove the fan.

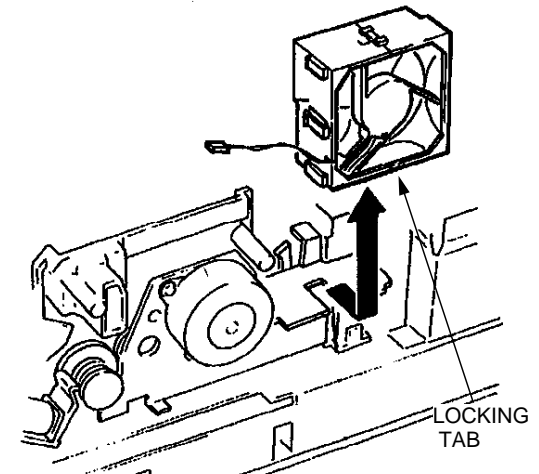


Figure 1. Fan

#### Replacement

1. Reinstall in reverse order.

## REP 3.4 Feed Solenoid

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the three screws retaining the shield to the chassis (PL 5.1).
5. Remove the driver PWB (REP 5.5).
6. Remove the two screws retaining the solenoid to the chassis (figure 1).
7. Remove the feed solenoid.

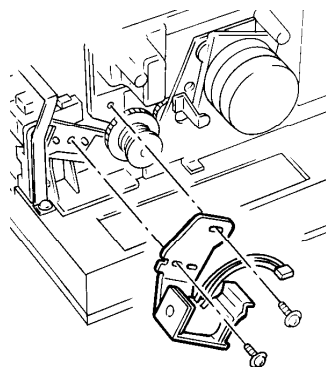


Figure 1. Feed solenoid

#### Replacement

1. Reinstall the feed solenoid.
2. Perform the feed solenoid adjustment (ADJ 3.1).
3. Reinstall the remaining components in reverse order.

## REP 3.5 Right Frame Assembly

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Disconnect connectors CN4 and CN5 on the driver PWB.
4. Disconnect the in-line connector.
5. Remove the three screws retaining the right frame assembly to the chassis (figure 1).
6. Press out gently on the front and rear frame to release the right frame assembly (figure 2).
7. Remove the right frame assembly.

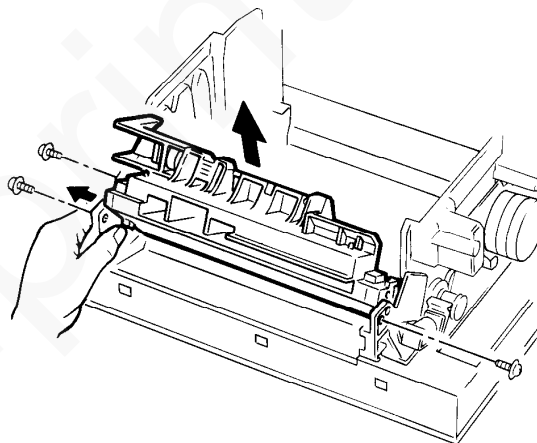


Figure 1. Right frame assembly

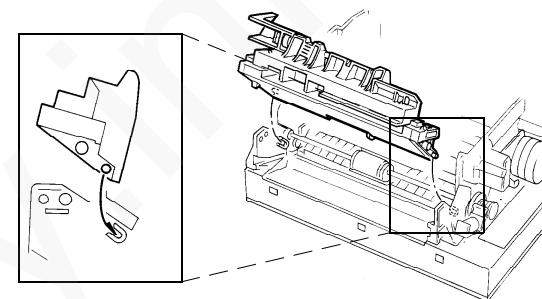


Figure 2. Right frame assembly

#### Replacement

*NOTE: Ensure the paper sensor does not strike the feed roller. The sensor could be damaged.*

1. Reinstall in reverse order.



## REP 3.6 Density Control (7041 W/O Tag 42 ONLY)

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the right frame assembly (REP 3.5).
4. Gently pry loose the density control locking tabs from the right frame assembly (figure 1).
5. Remove the density control.

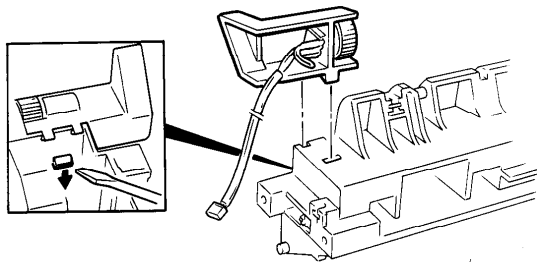


Figure 1. Density control

#### Replacement

1. Reinstall in reverse order.

## REP 3.7 Paper Sensor

### Parts List on PL 3.2

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the LV power supply (REP 5.7).
3. Remove the HV power supply (REP 5.8).
4. Remove the sensor (figure 1).

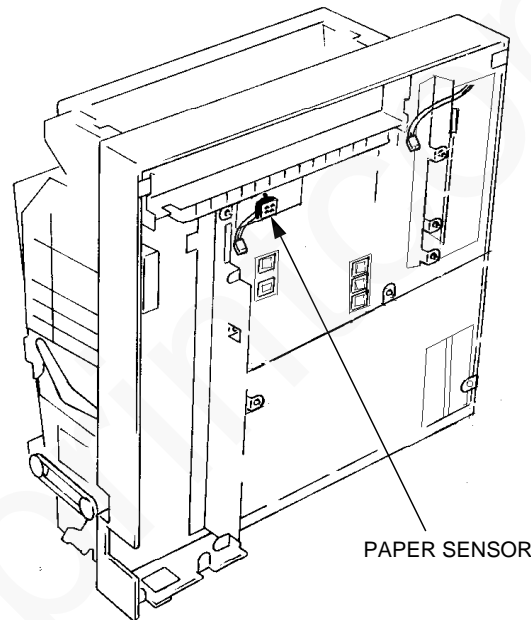


Figure 1. Paper sensor

#### Replacement

1. Reinstall in reverse order.

## REP 3.8 Paper Feed Roller

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the driver PWB (REP 5.5).
5. Remove the right frame assembly (REP 3.5).
6. Remove the feed solenoid (REP 3.4).
7. Position the bearings on the roller to align with slots in the frame (figure 1).
8. Remove the paper feed roller.

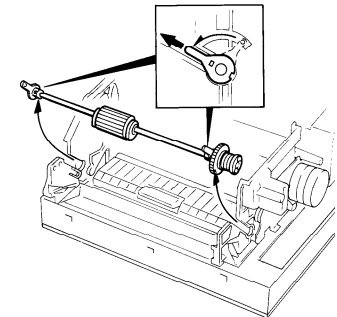


Figure 1. Paper feed roller

#### Replacement

1. Reinstall the components in step 6 through step 8 in reverse order.
2. Perform the feed solenoid adjustment (ADJ 3.1).
3. Reinstall the remaining components in reverse order.
4. Perform the print registration adjustment (ADJ 5.2).

## REP 3.9 Rubber Pinch Roller

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the springs from the arms that support the metal pinch roller assembly.
4. Remove the metal pinch roller assembly.
5. Remove the screw and grounding clip retaining the rubber pinch roller (figure 1).
6. Position the bearing on the roller to align with the slot in the front frame.
7. Remove the rubber pinch roller (figure 1).
  - a. Slide the roller towards the front of the machine and lift.

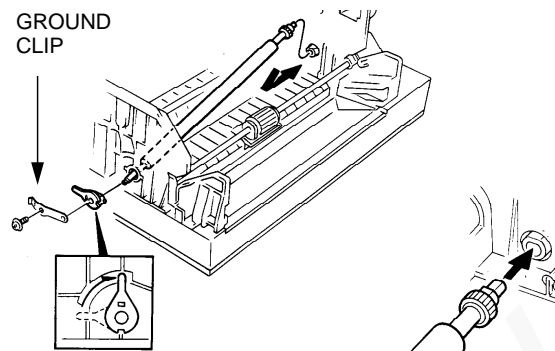


Figure 1. Rubber pinch roller

#### Replacement

*NOTE: When reinstalling the springs to the arms that support the metal pinch roller assembly, be sure the larger spring goes towards the front of the machine.*

1. Reinstall in reverse order.
2. Perform the print registration adjustment (ADJ 5.2).

## REP 3.10 Corotron Assembly

### Parts List on PL 3.2

#### Removal

*NOTE: Be careful not to break the corotron wires.*

1. Switch off the power and disconnect the power cord from the machine.
2. Open the top cover assembly.
3. Remove the two screws retaining the corotron assembly to the chassis (figure 1).
4. Release the locking tabs.
5. Remove the corotron assembly.

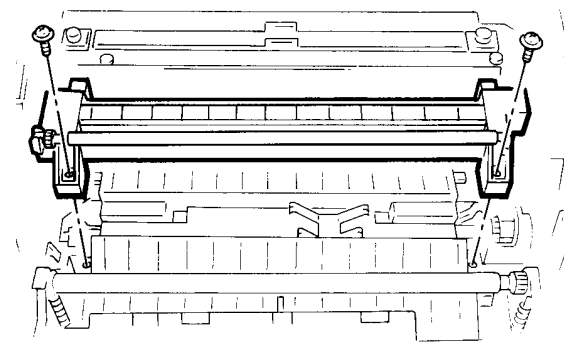


Figure 1. Corotron assembly

#### Replacement

1. Reinstall in reverse order.



## REP 3.11 Friction Pad

### Parts List on PL 3.2

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the three screws retaining the driver PWB shield to the chassis (PL 5.1).
5. Remove the driver PWB (REP 5.5).
6. Remove the the feed solenoid (REP 3.4).
7. Remove the right frame assembly (REP 3.5).
8. Remove the paper feed roller (REP 3.8).
9. Release the paper guide locking tabs under the friction pad (figure 1).
10. Remove the friction pad.

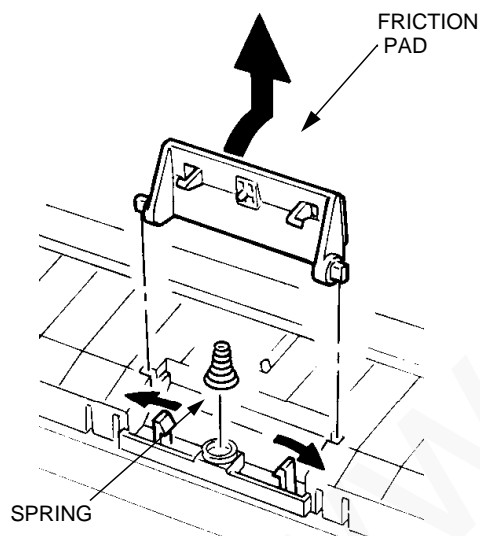


Figure 1. Friction pad

#### Replacement

1. Reinstall the components in step 6 through step 8 in reverse order.
2. Perform the feed solenoid adjustment (ADJ 3.1).
3. Reinstall the remaining components in reverse order.

## REP 3.12 Right Paper Guide

### Parts List on PL 3.2

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the three screws retaining the driver PWB shield to the chassis (PL 5.1).
5. Remove the driver PWB (REP 5.5).
6. Remove the the feed solenoid (REP 3.4).
7. Remove the right frame assembly (REP 3.5).
8. Remove the paper feed roller (REP 3.8).
9. Remove the right paper guide (figure 1).
  - a. Release the the paper guide by pressing on the locking tabs located at the center of the guide.
  - b. Press together the locking tabs located at each end of the guide.
  - c. Remove the right paper guide.

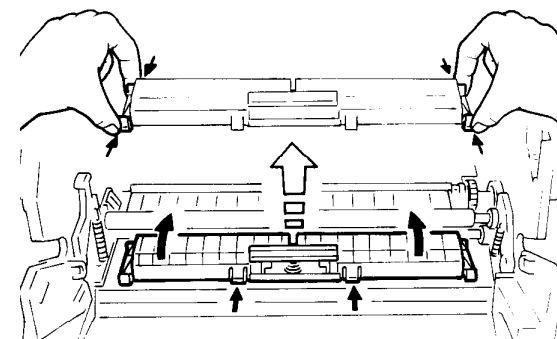


Figure 1. Right paper guide

## Replacement

### CAUTION

The actuator may be damaged if the paper guide sensor slot is not properly aligned to the actuator.

1. Reinstall the components in step 6 through step 9 in reverse order.
2. Perform the feed solenoid adjustment (ADJ. 3.1).
3. Reinstall the remaining components in reverse order.

## REP 3.13 Lower Paper Guide

### Parts List on PL 3.2

### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the three screws retaining the driver PWB shield to the chassis (PL 5.1).
5. Remove the driver PWB (REP 5.5).
6. Remove the the feed solenoid (REP 3.4).
7. Remove the right frame assembly (REP 3.5).
8. Remove the paper feed roller (REP 3.8).
9. Remove the rubber pinch roller (REP 3.8).
10. Remove the corotron assembly (REP 3.10).
11. Remove the right paper guide (REP 3.12).
12. Remove the two screws retaining the lower paper guide to the chassis.
13. Release the two locking tabs retaining the lower paper guide to the chassis (figure 1).
14. Remove the lower paper guide.

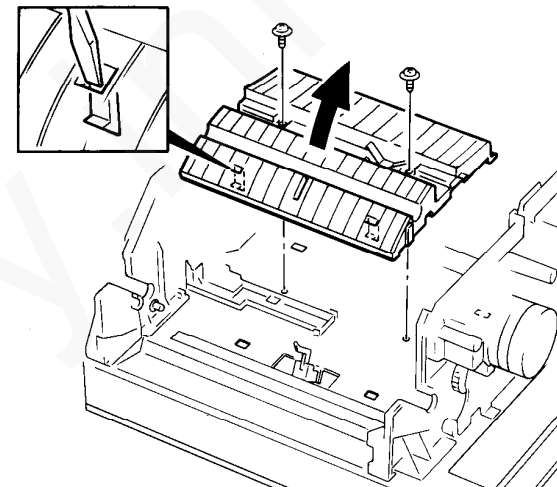


Figure 1. Lower paper guide

### Replacement

### CAUTION

The actuator may be damaged if the paper guide sensor slot is not properly aligned to the actuator.

1. Reinstall the components in step 6 through step 14 in reverse order.
2. Perform the feed solenoid adjustment (ADJ. 3.1).
3. Reinstall the remaining components in reverse order.

## Replacement

### CAUTION

The actuator may be damaged if the paper guide sensor slot is not properly aligned to the actuator.

1. Reinstall the components in step 6 through step 9 in reverse order.
2. Perform the feed solenoid adjustment (ADJ. 3.1).
3. Reinstall the remaining components in reverse order.

## REP 3.13 Lower Paper Guide

### Parts List on PL 3.2

### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the three screws retaining the driver PWB shield to the chassis (PL 5.1).
5. Remove the driver PWB (REP 5.5).
6. Remove the the feed solenoid (REP 3.4).
7. Remove the right frame assembly (REP 3.5).
8. Remove the paper feed roller (REP 3.8).
9. Remove the rubber pinch roller (REP 3.8).
10. Remove the corotron assembly (REP 3.10).
11. Remove the right paper guide (REP 3.12).
12. Remove the two screws retaining the lower paper guide to the chassis.
13. Release the two locking tabs retaining the lower paper guide to the chassis (figure 1).
14. Remove the lower paper guide.

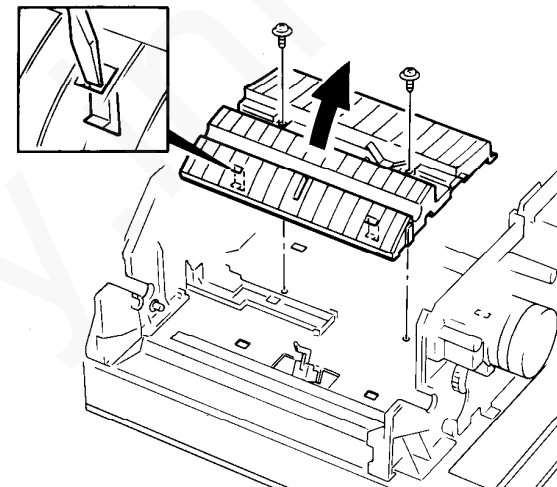


Figure 1. Lower paper guide

### Replacement

### CAUTION

The actuator may be damaged if the paper guide sensor slot is not properly aligned to the actuator.

1. Reinstall the components in step 6 through step 14 in reverse order.
2. Perform the feed solenoid adjustment (ADJ. 3.1).
3. Reinstall the remaining components in reverse order.

## REP 3.14 Rear Frame

### Parts List on PL 3.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Remove the setup PWB (REP 5.6).
4. Remove the three screws retaining the driver PWB shield to the chassis (PL 5.1).
5. Remove the driver PWB (REP 5.5).
6. Remove the feed solenoid (REP 3.4).
7. Remove the right frame assembly (REP 3.5).
8. Remove the paper feed roller (REP 3.8).
9. Remove the metal pinch roller (PL 3.1).
  - a. Remove the springs from the support arms.
10. Remove the four screws retaining the rear frame to the chassis (figure 1).
11. Remove the rear frame.

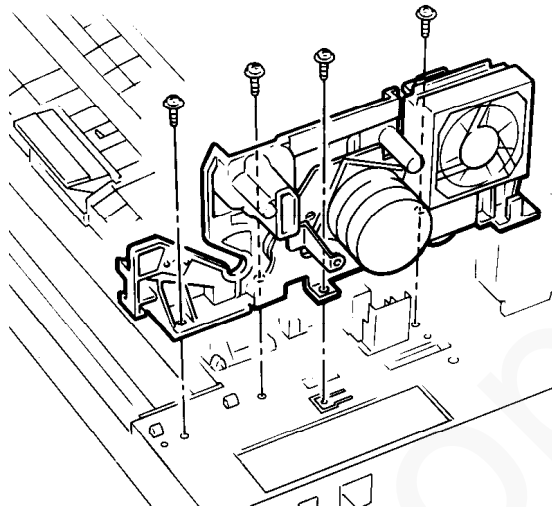


Figure 1. Rear frame

#### Replacement

*NOTE: This part may require lubrication, reference the lubrication procedure in section 6.*

1. Reinstall the components in step 6 through step 11 in reverse order.
2. Perform the feed solenoid adjustment (ADJ. 3.1).
3. Reinstall the remaining components in reverse order.

## REP 3.15 Fuser Assembly

### Parts List on PL 3.2

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the front/rear covers (REP 1.6).
3. Disconnect the connectors CN11 and CN12 on the driver PWB (figure 1).
4. Disconnect the connector CN101 on the LV power supply (figure 1).
5. Remove the four screws retaining the fuser assembly to the chassis (figure 2).
6. Remove the fuser assembly.

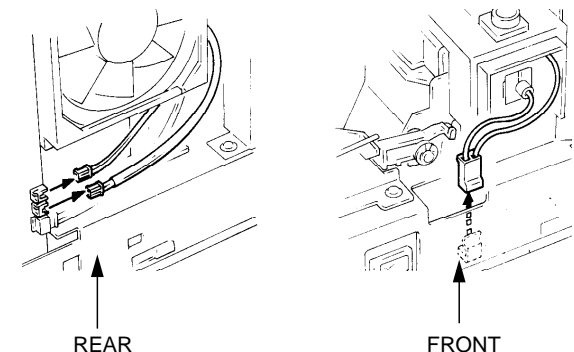


Figure 1. Fuser assembly connectors

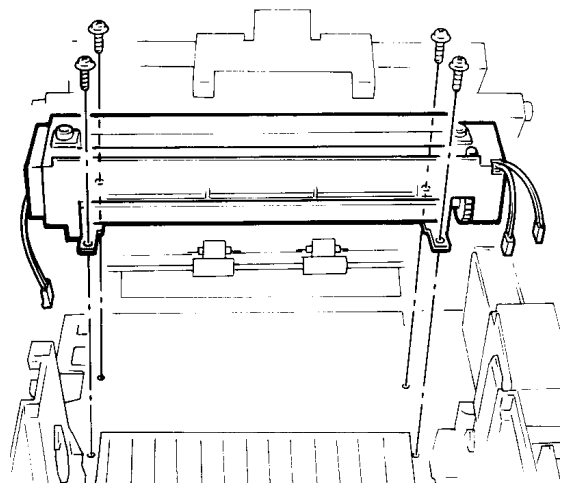


Figure 2. Fuser assembly

## Replacement

**NOTE:** Ensure that the wire harnesses for CN11 and CN12 are routed through the cut out on the fuser mounting bracket towards the rear of the terminal.

1. Reinstall in reverse order.
2. Perform fuser temperature adjustment (ADJ 5.1).

## REP 4.1 Lower Exit Roller Assembly

### Parts List on PL 4.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover assembly (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the belt on the lower exit roller assembly (figure 1).
5. Remove the E-rings from both ends of the roller (figure 1).
6. Remove the lower exit roller assembly.

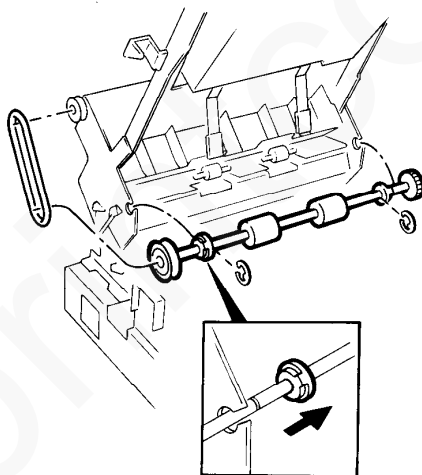


Figure 1. Lower exit roller assembly

## Replacement

1. Reinstall in reverse order.

## REP 4.2 Upper Exit Roller Assembly

### Parts List on PL 4.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover assembly (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the belt on the lower exit roller assembly (figure 1).
5. Remove the E-rings from both ends of the roller (figure 1).
6. Remove the upper exit roller assembly.

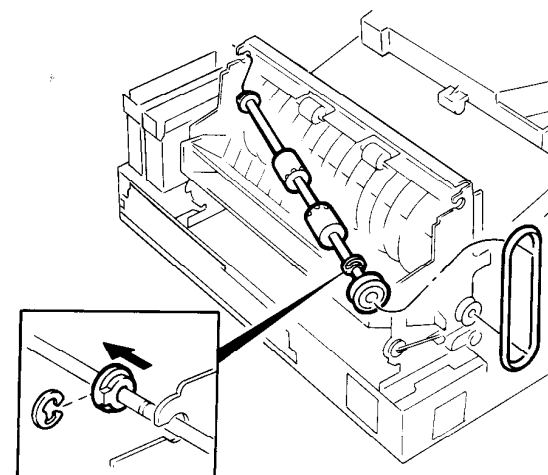


Figure 1. Upper exit roller assembly

## Replacement

1. Reinstall in reverse order.

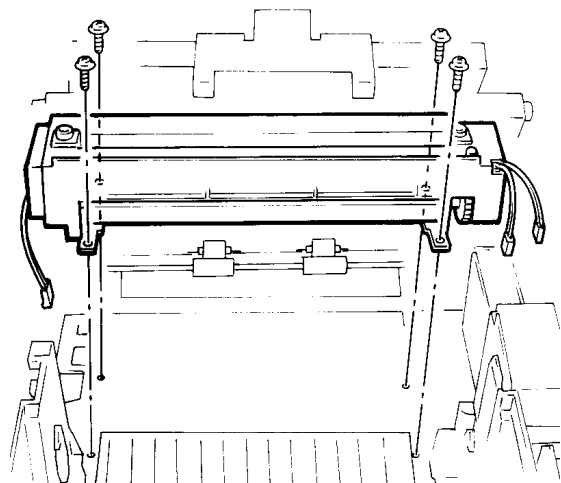


Figure 2. Fuser assembly

## Replacement

**NOTE:** Ensure that the wire harnesses for CN11 and CN12 are routed through the cut out on the fuser mounting bracket towards the rear of the terminal.

1. Reinstall in reverse order.
2. Perform fuser temperature adjustment (ADJ 5.1).

## REP 4.1 Lower Exit Roller Assembly

### Parts List on PL 4.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover assembly (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the belt on the lower exit roller assembly (figure 1).
5. Remove the E-rings from both ends of the roller (figure 1).
6. Remove the lower exit roller assembly.

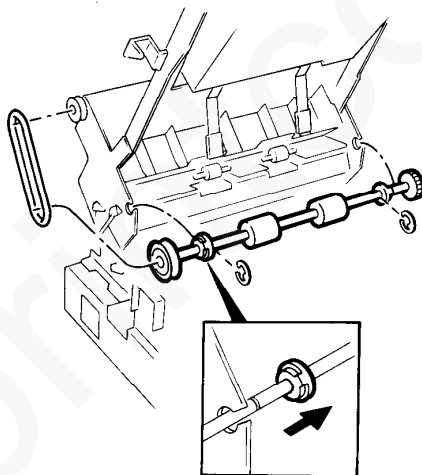


Figure 1. Lower exit roller assembly

## Replacement

1. Reinstall in reverse order.

## REP 4.2 Upper Exit Roller Assembly

### Parts List on PL 4.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Remove the top cover assembly (REP 1.2).
3. Remove the scanner module (REP 2.1).
4. Remove the belt on the lower exit roller assembly (figure 1).
5. Remove the E-rings from both ends of the roller (figure 1).
6. Remove the upper exit roller assembly.

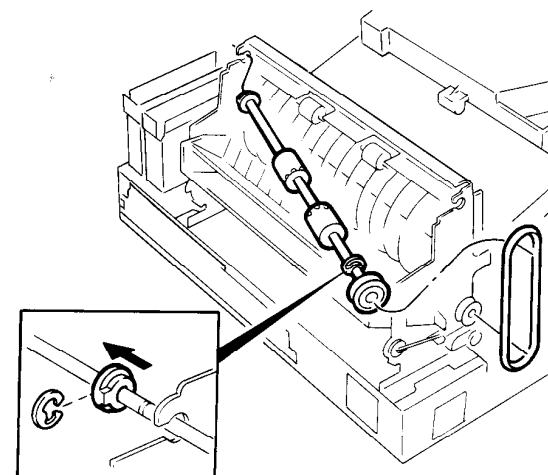


Figure 1. Upper exit roller assembly

## Replacement

1. Reinstall in reverse order.

## REP 4.3 Toner Motor/Sensor

### Parts List on PL 4.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Spread out a drop cloth to work on.
3. Remove the drum module and the developer assembly.
4. Separate the drum module from the developer assembly.
5. Remove the gear cover from the developer assembly (PL 4.1).
6. Remove the belt from the developer assembly (PL 4.1).

**NOTE:** Be careful when removing the sensor, tone can spill from the hole where the sensor was mounted to the developer assembly.

7. Remove the two screws retaining the sensor and the two screws retaining the motor (PL 4.1).
8. Remove the toner motor/sensor.

#### Replacement

**NOTE:** This part may require lubrication, reference the lubrication procedure in section 6.

1. Reinstall in reverse order.

## REP 5.1 Main PWB

### Parts List on PL 5.2 and 5.3

#### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

#### Removal

1. Switch off the power and connect the ESD grounding wire.
2. Disconnect the telephone and line cables.
3. Remove the two screws retaining the PWB chassis to the chassis (figure 1).
4. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
5. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2 and CN4
  - 7042/7041 W/ Tag 42 - CN3 and CN5
6. Remove the PWB chassis.
7. Remove the five screws retaining the main PWB (figure 2).
8. Remove the main PWB.

#### NOTES:

- 7041 W/O Tag 42 - The EPROM in location IC21 is in all machine configurations. The EPROM in location IC62 is an additional language chip for RX, XLA, and XCI.
  - 7042/7041 W/ Tag 42 - There is only one EPROM in location IC8.
9. Remove the EPROM(S) from main PWB (REP 5.2).

## Replacement

#### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

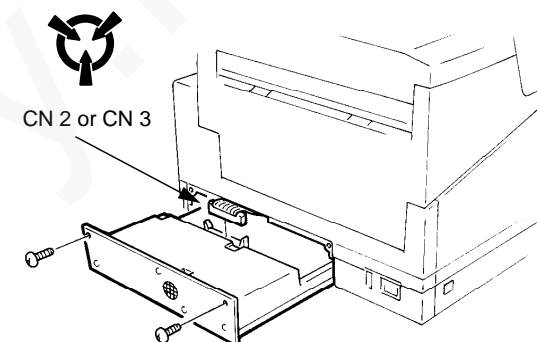


Figure 1. PWB chassis

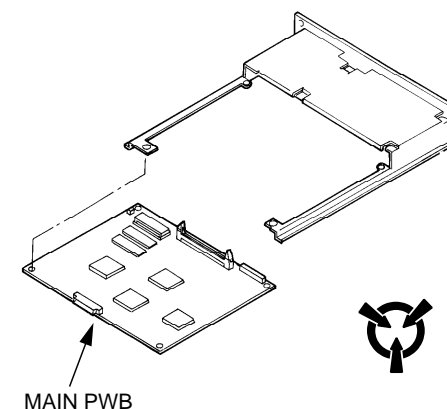


Figure 2. Main PWB



## REP 5.2 EPROMs

### Parts List on PL 5.2 and 5.3

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Disconnect the telephone and line cables.
3. Remove the two screws retaining the PWB chassis to the chassis (figure 1).
4. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
5. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2
  - 7042/7041 W/ Tag 42 - CN3

##### NOTES:

- 7041 W/O Tag 42 - The EPROM in location IC21 is in all machine configurations. The EPROM in location IC62 is an additional language chip for RX, XLA, and XCI.
  - 7042/7041 W/ Tag 42 - There is only one EPROM in location IC8.
6. Remove the EPROMs (figure 2).

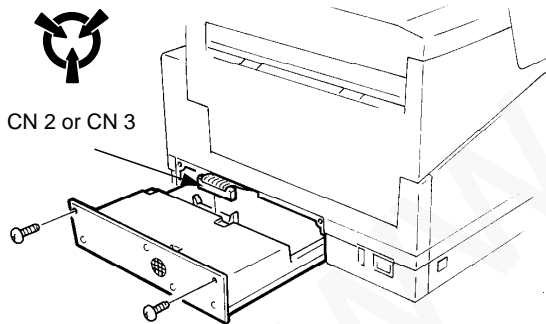


Figure 1. PWB chassis

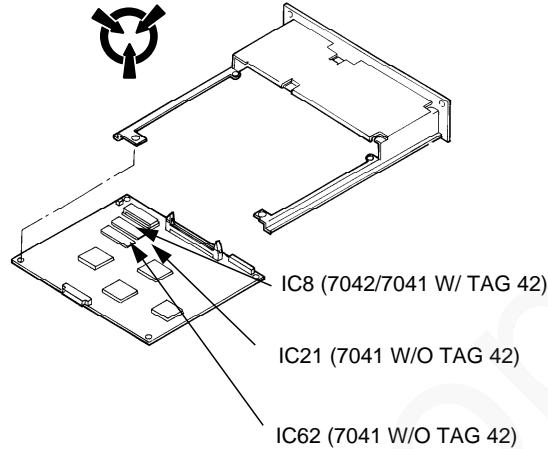


Figure 2. EPROMs

#### Replacement

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

## REP 5.3 LCU PWB

### Parts List on PL 5.2 and 5.3

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Disconnect the telephone and line cables.
3. Remove the two screws retaining the PWB chassis to the chassis (figure 1).
4. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
5. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2 and CN4
  - 7042/7041 W/ Tag 42 - CN3 and CN5
6. Remove the main PWB (REP 5.1).
7. Remove the ground wire.
8. Release the LCU PWB from the plastic standoffs (figure 2).
9. Remove the LCU PWB.

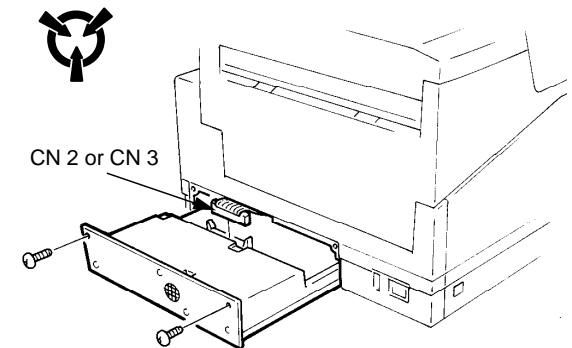


Figure 1. PWB chassis



## REP 5.4 Speaker

### Parts List on PL 5.2 and 5.3

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Disconnect the telephone and line cables.
3. Remove the two screws retaining the PWB chassis to the chassis (figure 1).
4. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
5. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2 and CN4
  - 7042/7041 W/ Tag 42 - CN3 and CN5
6. Remove the PWB chassis (figure 1).
7. Remove the two screws retaining the speaker to the PWB chassis.
8. Remove the speaker.



CN 2 or CN 3

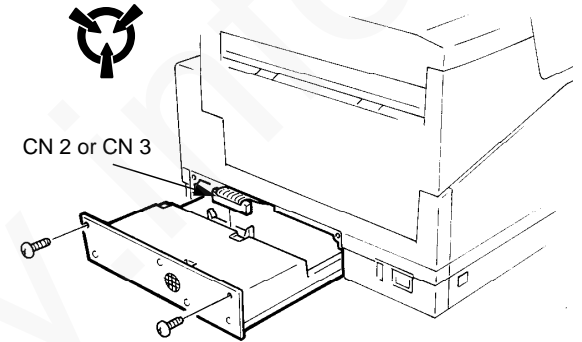


Figure 1. PWB chassis

#### Replacement

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

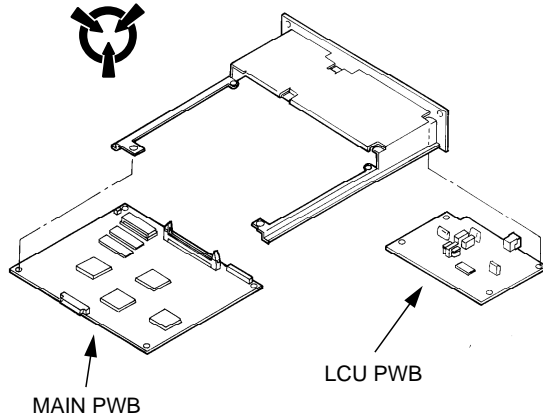


Figure 2. LCU PWB

#### Replacement

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

**RX NOTE:** Be sure to remove the jumpered connectors CN3 and CN4 from the old PWB and reinstall on the new PWB. See section 6 for LCU PWB configuration.

1. Reinstall in reverse order.

## REP 5.4 Speaker

### Parts List on PL 5.2 and 5.3

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Disconnect the telephone and line cables.
3. Remove the two screws retaining the PWB chassis to the chassis (figure 1).
4. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
5. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2 and CN4
  - 7042/7041 W/ Tag 42 - CN3 and CN5
6. Remove the PWB chassis (figure 1).
7. Remove the two screws retaining the speaker to the PWB chassis.
8. Remove the speaker.



CN 2 or CN 3

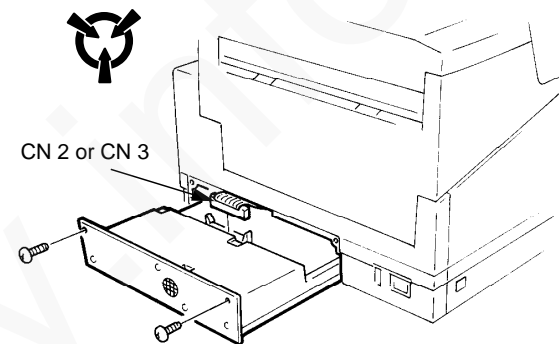


Figure 1. PWB chassis

#### Replacement

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

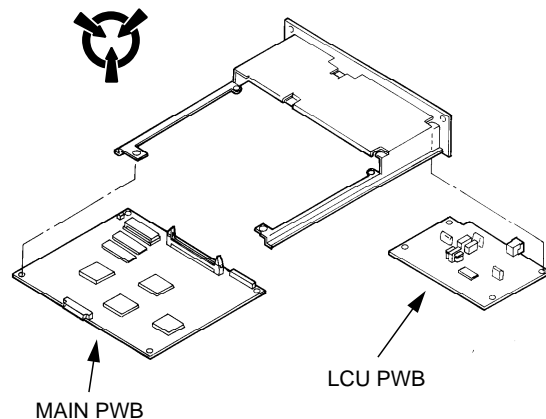


Figure 2. LCU PWB

#### Replacement

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

**RX NOTE:** Be sure to remove the jumpered connectors CN3 and CN4 from the old PWB and reinstall on the new PWB. See section 6 for LCU PWB configuration.

1. Reinstall in reverse order.

## REP 5.5 Driver PWB

### Parts List on PL 5.2

#### Removal

##### CAUTION

*Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.*

1. Switch off the power and connect the ESD grounding wire.
2. Remove the front/rear covers (REP 1.6).
3. Remove the drum counter.
4. Remove the setup PWB (REP 5.6).
5. Remove the three screws retaining the driver PWB shield to the chassis (figure 1).
6. Disconnect all connectors from the driver PWB.
7. Remove the screw retaining the driver PWB to bracket on the rear frame.
8. Disconnect the driver PWB from the HV power supply.

*NOTE: If the auxiliary tray has been installed, disconnect the auxiliary drive motor connector.*

9. Remove the driver PWB.

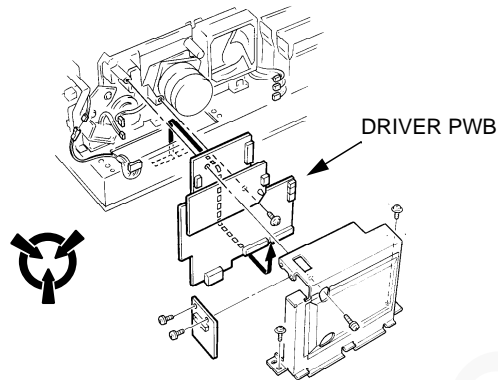


Figure 1. Driver PWB

#### Replacement

*NOTE: CN6 on the driver PWB is not used.*

1. Reinstall in reverse order.
2. Perform fuser temperature adjustment (ADJ 5.1).
3. Perform the print registration adjustment (ADJ 5.2).

## REP 5.6 Setup PWB

### Parts List on PL 5.1

#### Removal

##### CAUTION

*Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.*

1. Switch off the power and connect the ESD grounding wire.
2. Remove the upper right cover (REP 1.3).
3. Remove the two screws retaining the setup PWB to the shield and disconnect from the driver PWB (figure 1).
4. Remove the setup PWB.

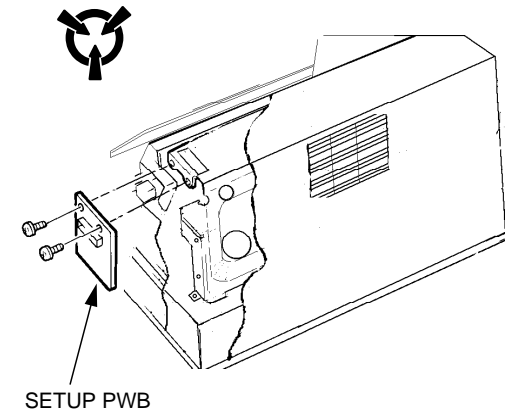


Figure 1. Setup PWB

#### Replacement

1. Reinstall in reverse order.
2. Perform fuser temperature adjustment (ADJ 5.1).
3. Perform the print registration adjustment (ADJ 5.2).

## REP 5.7 LV Power Supply

### Parts List on PL 5.1

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Remove the front/rear covers (REP 1.6).
3. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
4. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2
  - 7042/7041 W/Tag 42 - CN3
5. Remove the PWB chassis (figure 1).

##### CAUTION

If the auxiliary tray is installed, be careful not to break the aux. tray extension flap when performing step 5, the flap is located on the bottom left side of the machine.

6. Lift the right side of the machine until the machine is resting on the left side.
7. Remove the auxiliary tray, if installed (REP 6.1).
8. Remove the ten screws retaining the bottom pan to the chassis (figure 2).
9. Remove the bottom pan (figure 2).
10. Remove the six screws retaining the LV power supply to the chassis (figure 3).
11. Disconnect the connectors CN202 and CN101.
12. Separate the LV power supply from the HV power supply at CN1.
13. Remove the LV power supply.

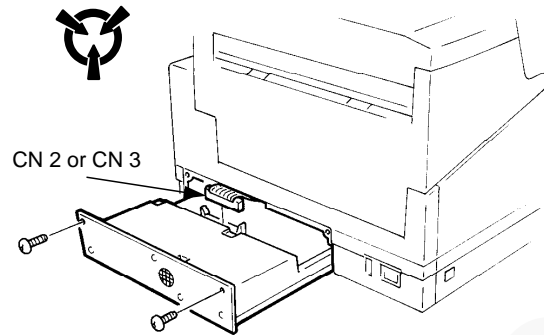


Figure 1. PWB chassis

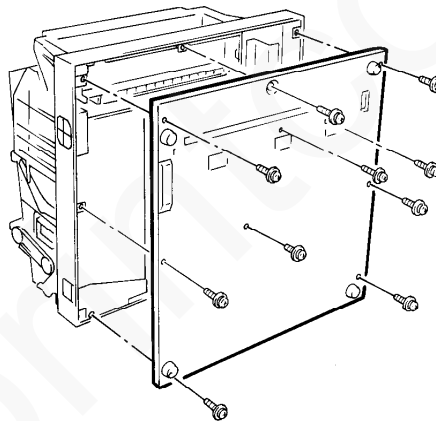


Figure 2. Bottom pan

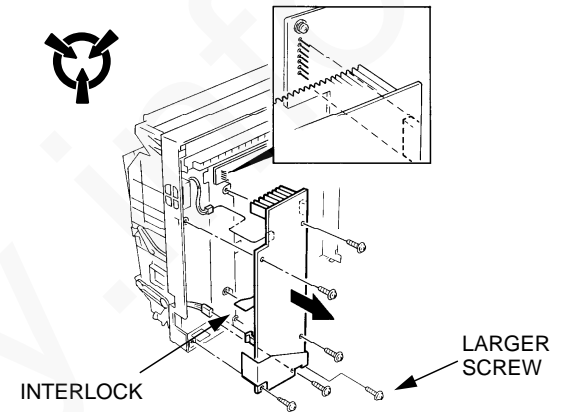


Figure 3. LV power supply

#### Replacement

##### NOTES:

- The driver PWB may have to be loosened to reinstall the LV power supply.
- Ensure that the top cover interlock actuator arm is in the proper position, when installing the LV power supply.

##### CAUTION

Ensure that the connection between the LV power supply and HV supply is aligned properly, it is possible to misalign this connection.

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

## REP 5.8 HV Power Supply

### Parts List on PL 5.1

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Remove the LV power supply (REP 5.7).
3. Remove the two screws retaining the two guides, if present.
4. Remove the six screws retaining the HV power supply to the chassis (figure 1).
5. Disconnect the connectors CN6 and CN9.
6. Remove the HV power supply.
7. Remove the main interconnect PWB from the HV power supply, if replacing the HV power supply.

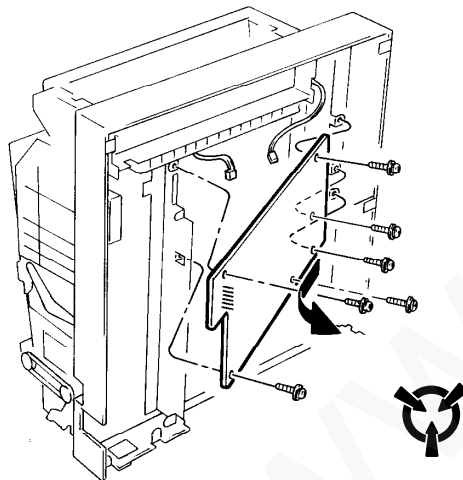


Figure 1. HV power supply

#### Replacement

*NOTE:* Ensure that the actuator arm is in the proper position, when installing the LV power supply.

##### CAUTION

Ensure that the connection between the LV power supply and HV supply is aligned properly, it is possible to misalign this connection.

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

## REP 5.9 Memory PWB

### Parts List on PL 5.2

#### Removal

##### CAUTION

Removing the PWB chassis from the machine will expose the PWBs. Follow electrostatic discharge precautions.

1. Switch off the power and connect the ESD grounding wire.
2. Remove the two screws retaining the PWB chassis to the chassis.
3. Slide the PWB chassis out of the machine until CN2 or CN3 is visible (figure 1).
4. Disconnect the following connectors:
  - 7041 W/O Tag 42 - CN2 and CN4
  - 7042/7041 W/ Tag 42 - CN3 and CN5
5. Remove the main PWB (REP 5.1).
6. Release the memory PWB from the plastic standoffs (figure 2).
7. Remove the memory PWB.

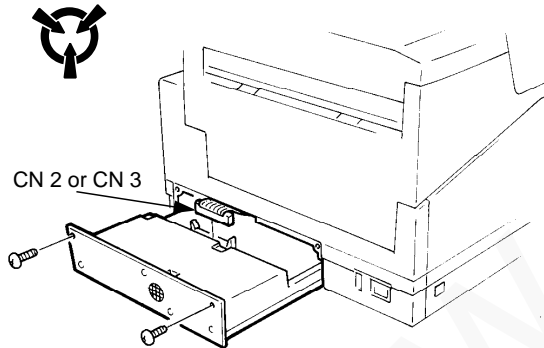


Figure 1. PWB chassis

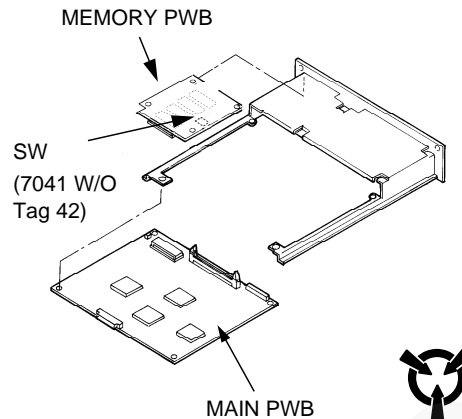


Figure 2. Memory PWB

#### Replacement

##### NOTES:

- (7041 W/O Tag 42) Verify that the switch (SW) on the memory PWB is set as follows:
  - 1 meg option (2 chips) = bit 1 is set to ON and bit 2 is set to OFF.
  - 2 meg option (4 chips) = bit 1 is set to OFF and bit 2 is set to ON.
- (7042/7041 W/ Tag 42) There is no switch on the memory PWB.

##### CAUTION

Ensure that the CN2 or CN3 connector on the main PWB is keyed properly when reconnecting.

1. Reinstall in reverse order.

## REP 6.1 Auxiliary Tray

### Parts List on PL 6.1

#### Removal

1. Switch off the power and disconnect the power cord from the machine.
2. Open the top cover and remove the following items from the machine:
  - a. Drum module/developer assembly
  - b. Fuser cleaning pad
3. Remove both paper cassettes.
4. Lift the right side of the machine until the machine is resting on the left side.
5. Remove the four screws retaining the auxiliary tray to the bottom of the machine (figure 1).
6. Disconnect the drive motor connector (CN3) from the driver PWB.
7. Remove the auxiliary tray.

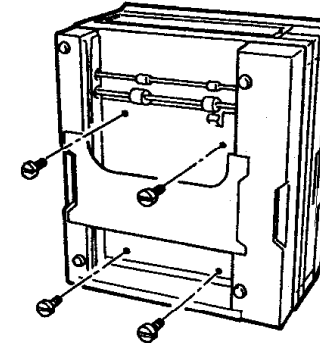


Figure 1. Auxiliary tray

#### Replacement

1. Reinstall in reverse order.



## ADJ 3.1 Feed Solenoid Adjustment

### Parts List on PL 3.1

#### Purpose

The procedure consists of two adjustments. The procedure sets the proper clearance between the solenoid pawl and the clutch spring. It sets the proper gap between the solenoid pawl and the clutch stopper.

#### Procedure

##### Upper paper cassette

1. Switch off the power and disconnect the power cord.
2. Remove the front/rear covers (REP 1.6).
3. Remove the driver PWB(REP 5.5).

##### Adjustment check

NOTE: If the solenoid pawl is against the clutch stopper, it may be necessary to depress the pawl before the paper feed roller can be rotated in the next step.

4. While pressing down on the friction pad, rotate the paper feed roller until the solenoid pawl touches the clutch spring hook.
5. Measure the distance between the clutch spring hook and the solenoid pawl, with pawl depressed. The gap should measure between 0.020 inches (.508 mm) to 0.039 inches (.991 mm) (figure 1).
6. Rotate the feed roller one full turn until the solenoid pawl touches the clutch spring hook again.

7. Measure the distance between the pawl and the clutch stopper. The gap should measure between 0.060 inches (1.532 mm) to 0.099 inches (2.51 mm) (figure 2).

##### Adjustment

8. Loosen the two screws on the solenoid, horizontally insert a 0.030 inches (.762 mm) gauge between the clutch spring hook and the pawl, with pawl depressed.
9. Tighten the two screws on the feed solenoid.
10. Rotate the feed roller one full turn until the pawl touches the clutch spring hook again.
11. Measure the distance between the clutch spring hook and the pawl, with pawl depressed. The gap should measure between 0.020 inches (.508 mm) to 0.039 inches (.991 mm) (figure 1).
12. Rotate the feed roller one full turn until the latch touches the clutch spring hook again.
13. Measure the distance between the solenoid pawl and the clutch stopper. The gap should measure between 0.060 inches (1.532 mm) to 0.099 inches (2.51 mm) (figure 2).
14. If the distance between pawl and the clutch stopper is incorrect, then loosen the two screws on the feed roller clutch and adjust to the proper measurement by rotating the feed roller.

#### Replacement

1. Reinstall in reverse order.

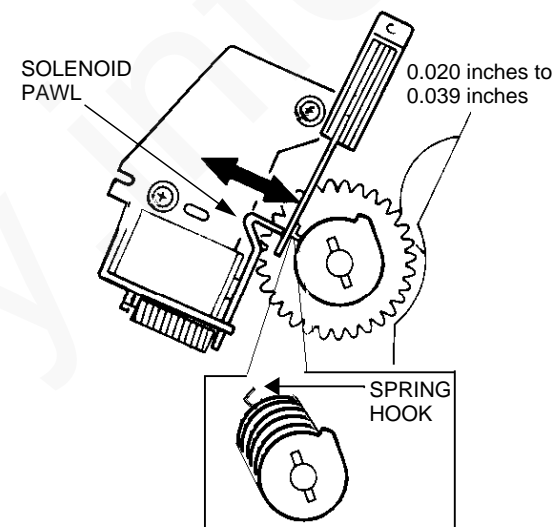


Figure 1. Feed solenoid adjustment

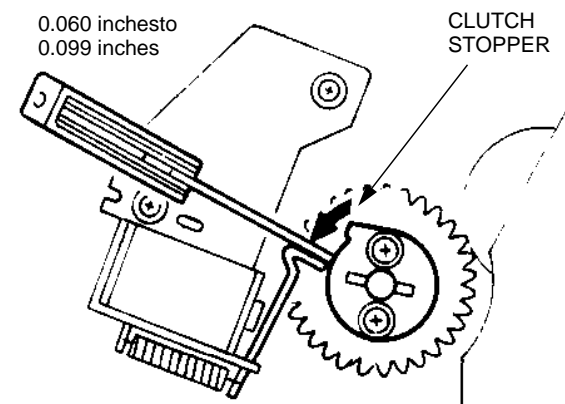


Figure 2. Stopper gap adjustment

## ADJ 5.1 Fuser Temperature

### Purpose

The fuser temperature adjustment is performed to assure proper fusing of toner to the paper. This procedure must be performed when replacing the fuser assembly, driver PWB and the LV power supply.

### Warning

**When performing the temperature adjustment, be extremely careful not to touch the hot fuser surface.**

### Procedure

#### Prepare for temperature check

1. Switch off the power.
2. Open the top cover and remove the drum module, developer assembly, fuser cleaning pad and the drum counter.
3. Install the service drum counter.
4. Install the interlock cheater.
5. Remove the upper right cover (REP 1.3).
6. Connect the setup tool connector to the setup PWB connector (CN2) (figure 1).
7. Switch on the power, while pressing the [UP] key on the setup tool. The setup tool should display the temperature reference number (figure 2).

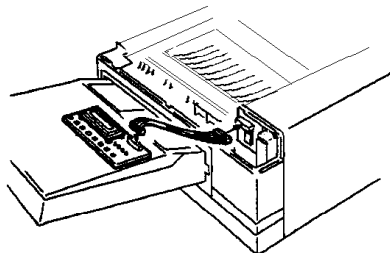


Figure 1. Setup Tool

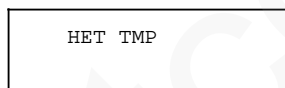


Figure 2. Display

*NOTE: The number in the display is a reference number and does not directly relate to the actual fuser temperature.*

8. Press the [Down] key on the setup tool to activate the print motor and turn on the fuser.

#### Temperature check

##### **NOTES:**

- Run the printer in this state for approximately five to seven minutes to allow the fuser temperature to stabilize.
- Observe the operating cycle of the fuser lamp, which can be seen illuminating at the front of the fuser assembly. The lamp will illuminate for a short time and then turn off for a short period of time before illuminating again and repeating the cycle.



9. Attach temperature tape to a piece of paper, then wrap the paper around the fuser pad with the tape facing down towards the fuser roller (figure 3).

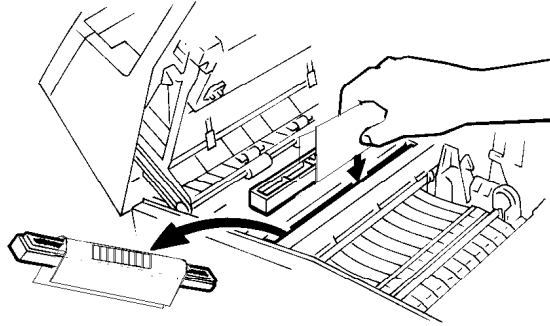


Figure 3. Temperature tape position.

10. Reinstall the fuser cleaning pad as the fuser lamp illuminates. Install the pad securely, then with one finger maintain very light pressure on the pad. Hold this position for one cycle of the fuser lamp. (Illuminates/Off/illuminates)

**NOTE:** The temperature range is 183 ° C,  $\pm 2^{\circ}$  C. If you are using temperature tape, P/N 99P03079, then partial darkening of the 188 will be acceptable.

11. Remove the fuser cleaning pad and examine the tape. The tape should have up to and including 182 ° C blackened out completely on both tapes (figure 4).

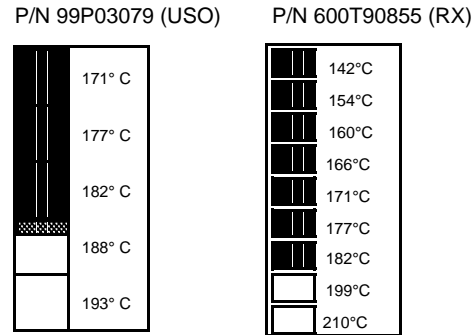


Figure 4. Temperature tape

#### Temperature adjustment

**NOTE:** Each digit change of the reference number on the setup tool will increase or decrease the temperature approximately 0.66 degrees.

12. Adjust the temperature using the [Function] or [Up] keys on the setup tool (Table 1.).
13. Press the [Down ] key on the setup tool twice to recycle the fuser temperature.
14. Perform the recycling for one minute to allow the temperature to stabilized.
15. Repeat steps 9, 10 and 11.
16. After the temperature is set properly, press the [Online] key to store the setting.
17. Press the [Down] key on the setup tool to stop the printer.

SETUP KEYS	FUNCTION
FUNCTION	Increases the reference number and fuser temperature.
UP	Decreases the reference number and fuser temperature.
DOWN	Activates and deactivates the print motor and fuser.
ONLINE	Stores the new reference number and fuser temperature.

Table 1. Setup Tool function keys

#### Replacement

1. Reinstall in reverse order.

## ADJ 5.2 Print Registration

### Purpose

This procedure allows the position of the image on the page to be adjusted. This procedure must be performed whenever the laser, driver PWB or paper feed rollers are replaced.

### Procedure

1. Switch off the power.
2. Open the top cover and remove the drum counter.
3. Install the service drum counter.
4. Remove the upper right cover (REP 1.3).
5. Close the top cover.
6. Connect the setup tool to the setup PWB connector (CN2) (figure 1).
7. Switch on the power, while pressing the [Function] key on the setup tool. The setup tool should display all asterisks for a few seconds (figure 1), then the display will change to the margins setup numbers (figure 2).
8. Press the [FF] key on the setup tool to select the paper size to be tested (Table 1).
9. Press the [Reset] key on the setup tool to print the test pattern.
10. Measure the left and top margins. Both margins should measure approximately 4.2 mm (figure 4).
11. Adjust the registration using the [Function], [Up], [Down], and the [Set] key on the setup tool (Table 1).
12. Press the [Online] key on the setup tool after changing the setting.
13. Press the [Reset] key on the setup tool to print the test pattern again for verification.
14. Repeat steps 10, 11, 12, and 13 until you have the proper setting.

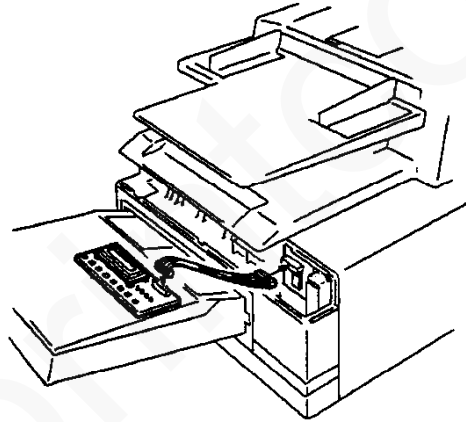


Figure 1. Setup Tool

#### NOTES:

- The paper size must be set correctly or the test will not perform properly.
- Paper will feed only from the upper paper cassette during this adjustment.

### Replacement

1. Reinstall in reverse order.



Figure 2. Display

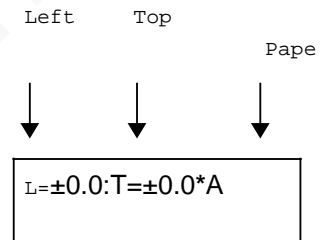


Figure 3. Display

SETUP KEYS	FUNCTION
FUNCTION	<ul style="list-style-type: none"> <li>Start print registration test.</li> <li>Increase the left margin setting.</li> </ul>
UP	Decrease the left margin setting.
DOWN	Increases the top margin setting.
SET	Decreases the top margin setting.
RESET	Prints the registration test pattern.
FF	* Selects the paper size. A = A4, L=Letter/Legal
ONLINE	Stores the margin settings.

Table 1. Setup Tool function keys

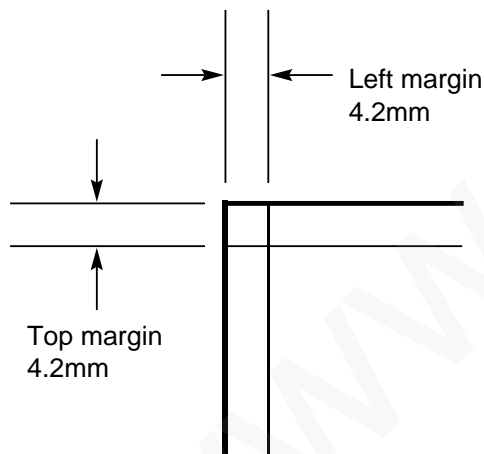


Figure 4. Margins

## ADJ 6.1 Auxiliary Feed Solenoid Adjustment

### Parts List on PL 6.1

#### Purpose

This adjustment consist of two parts. The first being proper clearance between the solenoid pawl and clutch spring. The second adjustment is performed to allow for proper clearance between the solenoid pawl and the clutch stopper.

#### Procedure

1. Switch off the power and disconnect the power cord.
2. Remove the auxiliary tray (REP 6.1).

#### Adjustment check

NOTE: If the feed roller latch is against the clutch stopper, it may be necessary to depress the latch before the paper feed roller can be rotated in the next step.

3. Rotate the paper feed roller until the solenoid pawl touches the clutch spring hook.
4. Measure the distance between the clutch spring hook and the pawl, with pawl depressed. The gap should measure between 0.020 inches (.508 mm) to 0.039 inches (.991 mm).

#### Adjustment

5. Loosen the screw on the feed solenoid using a chapman wrench, horizontally insert a 0.030 inches (.762 mm) gauge between the clutch spring hook and the pawl.

6. Tighten the screw on the feed solenoid.
7. Rotate the feed roller one full turn until the pawl touches the clutch spring hook again.
8. Measure the distance between the clutch spring hook and the pawl, with pawl depressed. The gap should measure between 0.020 inches (.508 mm) to .039 inches (.991 mm).

#### Replacement

1. Reinstall in reverse order.

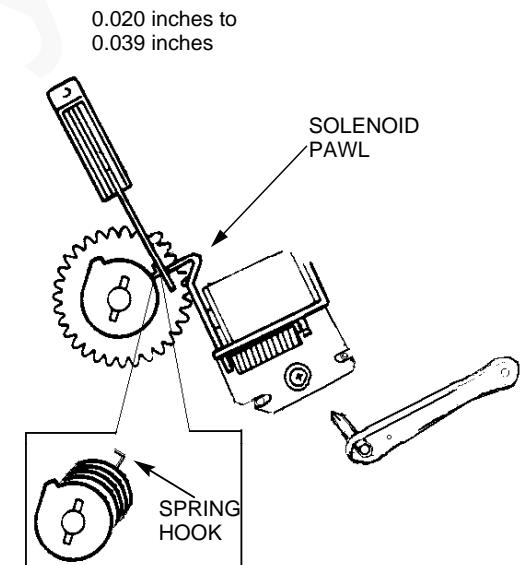


Figure 1. Auxiliary feed solenoid adjustment

SETUP KEYS	FUNCTION
FUNCTION	<ul style="list-style-type: none"> <li>Start print registration test.</li> <li>Increase the left margin setting.</li> </ul>
UP	Decrease the left margin setting.
DOWN	Increases the top margin setting.
SET	Decreases the top margin setting.
RESET	Prints the registration test pattern.
FF	* Selects the paper size. A = A4, L=Letter/Legal
ONLINE	Stores the margin settings.

Table 1. Setup Tool function keys

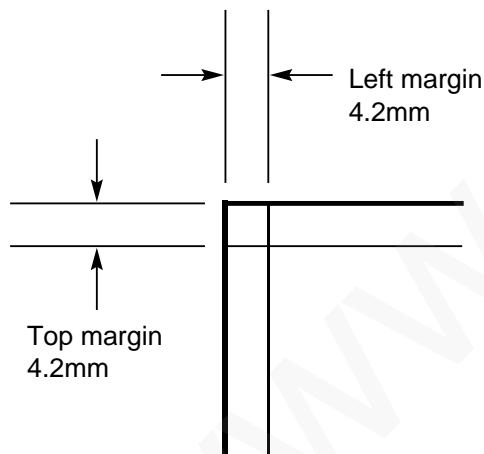


Figure 4. Margins

## ADJ 6.1 Auxiliary Feed Solenoid Adjustment

### Parts List on PL 6.1

#### Purpose

This adjustment consist of two parts. The first being proper clearance between the solenoid pawl and clutch spring. The second adjustment is performed to allow for proper clearance between the solenoid pawl and the clutch stopper.

#### Procedure

1. Switch off the power and disconnect the power cord.
2. Remove the auxiliary tray (REP 6.1).

#### Adjustment check

NOTE: If the feed roller latch is against the clutch stopper, it may be necessary to depress the latch before the paper feed roller can be rotated in the next step.

3. Rotate the paper feed roller until the solenoid pawl touches the clutch spring hook.
4. Measure the distance between the clutch spring hook and the pawl, with pawl depressed. The gap should measure between 0.020 inches (.508 mm) to 0.039 inches (.991 mm).

#### Adjustment

5. Loosen the screw on the feed solenoid using a chapman wrench, horizontally insert a 0.030 inches (.762 mm) gauge between the clutch spring hook and the pawl.

6. Tighten the screw on the feed solenoid.
7. Rotate the feed roller one full turn until the pawl touches the clutch spring hook again.
8. Measure the distance between the clutch spring hook and the pawl, with pawl depressed. The gap should measure between 0.020 inches (.508 mm) to .039 inches (.991 mm).

#### Replacement

1. Reinstall in reverse order.

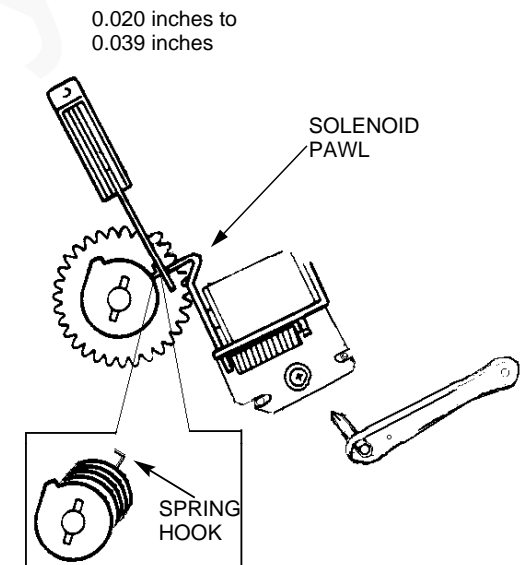


Figure 1. Auxiliary feed solenoid adjustment

## 5. Parts List

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- PL 1.1 Covers [5-4](#)
- PL 2.1 Scanner module (7041 W/O Tag 42) [5-6](#)
- PL 2.2A Scanner (upper) (7041 W/O Tag 42) [5-8](#)
- PL 2.2B Scanner (upper) ( 7042/7041 W/ Tag 42) [5-10](#)
- PL 2.3A Scanner Drive and Rollers (7041 W/O Tag 42) [5-12](#)
- PL 2.3B Scanner Drive and CIS (7042/7041 W/ Tag 42) [5-14](#)
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- PL 3.1 Printer (upper/frames) [5-18](#)
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- PL 4.1 Paper Path and Developer Assembly [5-22](#)
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- PL 5.4 Telephones, Cables and Cords [5-30](#)
- PL 6.1 Auxiliary Tray [5-32](#)
- Common Hardware [5-34](#)
- Part Number Index [5-35](#)

# Parts List Introduction

## Overview

The Parts List section provides exploded view illustrations of all spared subsystem components and a listing of the corresponding part numbers. The illustrations show the relationships between parts.

## Organization of this Section

The following elements make up the Parts List section:

### Parts Lists (PL)

Each item number in the part numbers listing corresponds to an item number in the illustration. All the parts in a given subsystem of the machine will be located in the same illustration or in a series of associated illustrations. The parts which are not spared are indicated by “- -” on the Part column.

### Exploded View Illustrations

An item that is called out on an illustration has a corresponding listing within this section.

Components are given item numbers that correspond to the part number listings.

Hardware items are lettered. Refer to the Common Hardware listing towards the end of this section to identify the item.

Assemblies and kits are a combination of several separate components. A bracket is used on the illustration when an assembly or kit is spared but is not shown. The item number of the assembly or kit precedes the bracket; the item numbers of the piece parts follow it.

## Common Hardware

The common hardware is listed in alphabetical order by the letter or letters used to identify each item in the hardware listing and in the illustrations. All hardware dimensions are in millimeters unless otherwise noted.

## Part Number Index

This index lists all the spared parts in the system in numerical order. Each number is followed by a reference to the parts list on which the part may be found.

## Other Information

### Abbreviations

Abbreviations are used in the parts lists and the exploded view illustrations to provide information in a limited amount of space. The following abbreviations are used in this manual:

A	-	AMP
P/J	-	Plug/Jack
P/O	-	Part of
PWB	-	Printed Wiring Board
RX	-	Rank Xerox
REF	-	Reference
Tag/MOD	-	Tag/Modification
USO	-	United States Operations
W/	-	With
W/O	-	Without
XCL	-	Xerox Canada Limited
XLA	-	Xerox Latin America

### Tag/MODs

The notation "Tag/MOD" in the part description indicates that the item is the entire Tag/Mod. The notation "P/O Tag/MOD" indicates that the item is only part of a Tag change, or modification, to the equipment.

When a part or an assembly has a Tag/Mod associated with it, check the Tag/MOD Index in the General Procedures/Information, section 6 of this manual for the name and purpose of the modification.

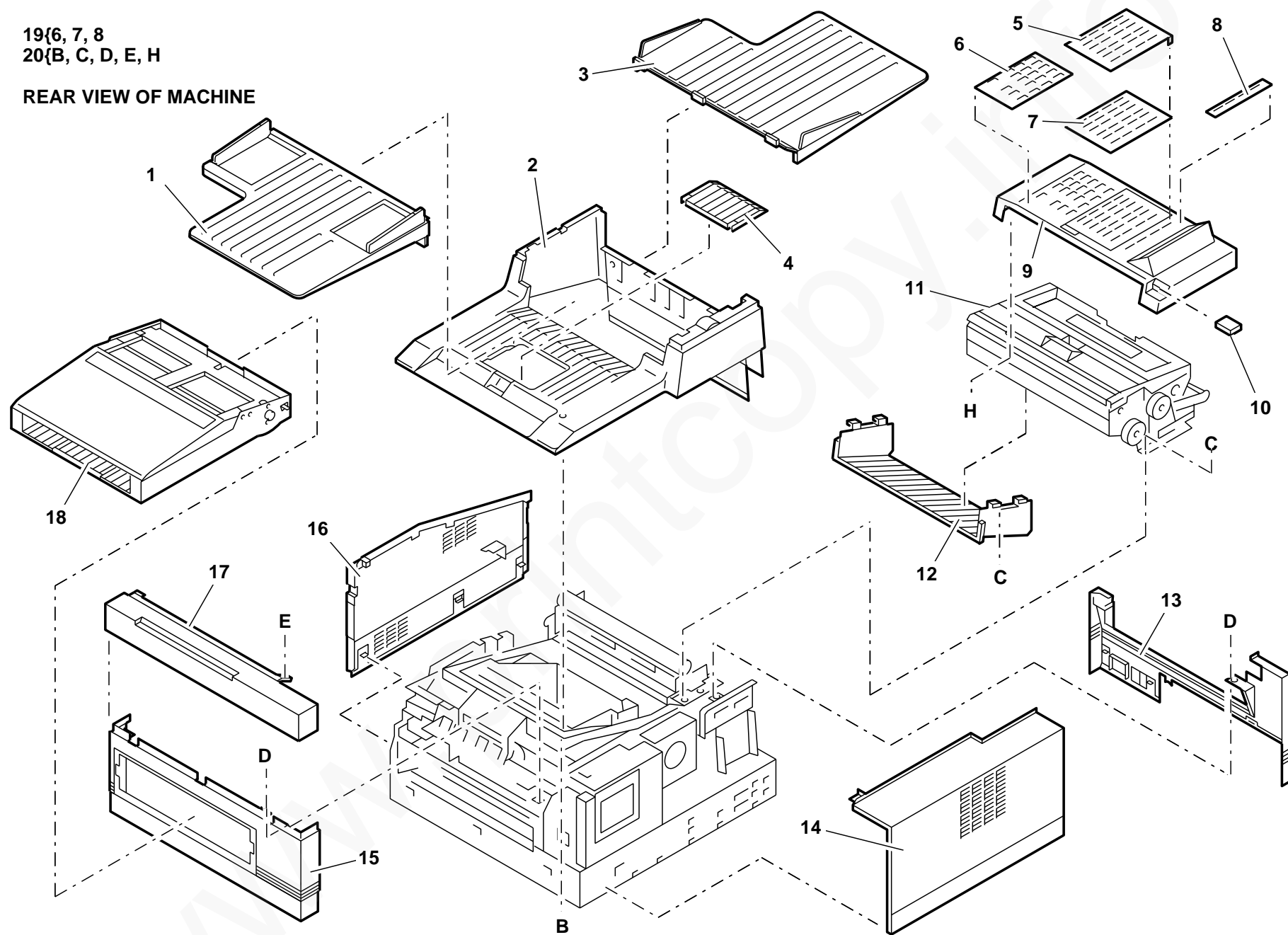
In some cases a part or assembly may be spared in two versions: with the Tag/MOD and without the Tag/MOD. In those cases, use whichever part is appropriate for the configuration of the machine on which the part is to be installed. If the machine does not have a particular Tag/MOD and the only replacement part available is listed as "W/Tag/MOD," install the Tag/MOD kit or all the piece parts. The Tag/MOD index tells you which kit or piece parts you need.

Whenever you install a Tag/Mod kit or all the piece parts that make up a Tag/MOD, mark the appropriate number on the Tag/MOD matrix.

## PL 1.1 Covers

19(6, 7, 8  
20(B, C, D, E, H

REAR VIEW OF MACHINE



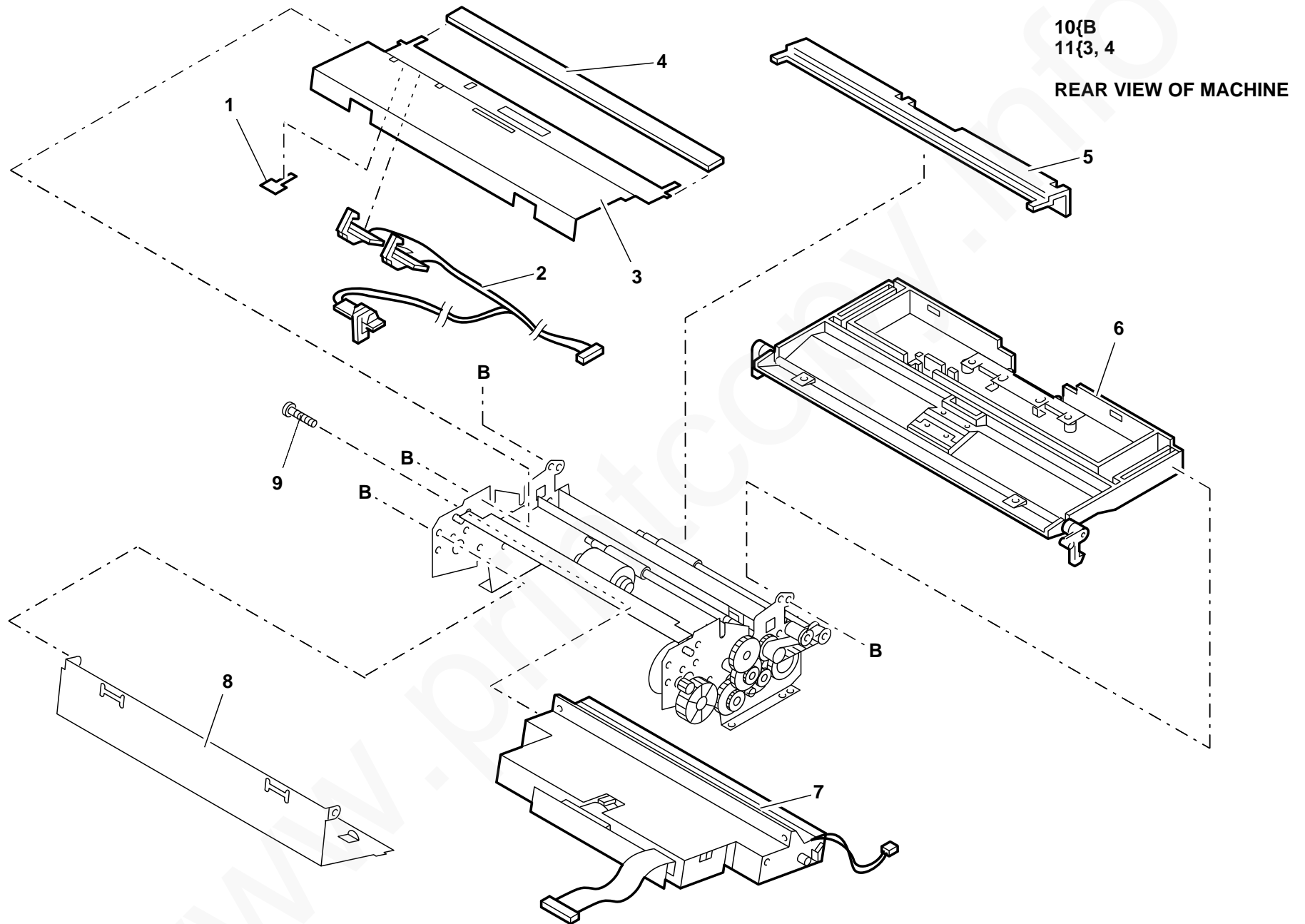


## PL 1.1 Covers

Item	Part	Description			
1	050K14760	Document Tray (7041 W/O Tag 42)		002E53140	Left Cover (7041 - XLA - 220V) (REP 1.5)
	050K19550	Document Tray (7042/7041 W/ Tag 42)		002E69050	Left Cover (7042 - XLA - 220V) (REP 1.5)
2	002E52930	Top Cover (7041 W/O Tag 42) (REP 1.2)		002E53150	Left Cover (7041 W/O Tag 42 - RX - DE) (REP 1.5)
	002E69010	Top Cover (7042/7041 W/ Tag 42) (REP 1.2)		002E69060	Left Cover (7041 W/ Tag 42 - RX - DE) (REP 1.5)
3	050K14770	Document Exit Tray		002E53160	Left Cover (7041 W/O Tag 42 - RX - AT, DK, FI, GR, NL, NO, PT, ES, SE, IT) (REP 1.5)
4	050E08830	Tray Extension		002E69070	Left Cover (7041 W/ Tag 42 - RX - AT, DK, FI, GR, NL, NO, PT, ES, SE, IT, EEO-AU) (REP 1.5)
5	002E53050	Access Panel (7041 W/O Tag 42)		002E53170	Left Cover (7041 W/O Tag 42- RX - BE, CH, GB, IE, FR, EEO-UK, EEO- AU) (REP 1.5)
	048E00010	Access Panel (7042/7041 W/O Tag 42)		002E69080	Left Cover (7041 W/ Tag 42 - RX - BE, CH, GB, IE, FR, EEO-UK) (REP 1.5)
6	--	Keypad Label (P/O item 19)			
7	--	Function Key Label (P/O item 19)			
8	--	Control Panel Label (P/O item 19)			
9	101K16340	Control Panel Assembly (7041 - USO, XCL - English) (REP 1.1)	14	002E52910	Rear Cover (REP 1.6)
	101K18790	Control Panel Assembly (7042 - USO, XCL- English) (REP 1.1)	15	002E52900	Lower Right Cover (REP 1.4)
	101K16530	Control Panel Assembly (7041 W/O Tag 42- RX Generic, order appropriate Label Kit item 19) (REP 1.1)	16	002E52880	Front Cover (REP 1.6)
	101K18820	Control Panel Assembly (7041 W/ Tag 42 - RX Generic, order appropriate Label Kit item 19) (REP 1.1)	17	002E52890	Upper Right Cover (REP 1.3)
	101K17850	Control Panel Assembly (7041- XLA - Spanish) (REP 1.1)	18	050K14960	Paper Cassette
	101K18800	Control Panel Assembly (7042 - XLA - Spanish) (REP 1.1)	19	092S14400	Label Kit (7041 W/O Tag 42 - RX - English)
	101K17860	Control Panel Assembly (7041- XLA - Portuguese) (REP 1.1)		TBD	Label Kit (7041 W/ Tag 42 - RX - English)
	101K18810	Control Panel Assembly (7042 - XLA - Portuguese) (REP 1.1)		092S14401	Label Kit (7041W/O Tag 42 - RX - French)
10	011E04730	Lever (7041 W/O Tag 42)		TBD	Label Kit (7041 W/ Tag 42- RX - French)
	011E05250	Lever (7042/7041 W/ Tag 42)		092S14402	Label Kit (7041W/O Tag 42 - RX - Dutch)
11	--	Scanner module (not spared) (REP 2.1)		TBD	Label Kit (7041 W/ Tag 42- RX - Dutch)
12	038E11590	Paper Guide (7041 W/O Tag 42)		092S14403	Label Kit (7041W/O Tag 42 - RX - Swedish)
	038E13200	Paper Guide (7042/7041 W/ Tag 42)		TBD	Label Kit (7041 W/ Tag 42- RX - Swedish)
13	002E52920	Left Cover (7041 - USO) (REP 1.5)		092S14405	Label Kit (7041W/O Tag 42 - RX - Danish)
	002E69020	Left Cover (7042 - USO) (REP 1.5)		TBD	Label Kit (7041 W/ Tag 42 - RX - Danish)
	002E53120	Left Cover (7041 - XCL) (REP 1.5)		092S14406	Label Kit (7041W/O Tag 42 - RX - Norwegian)
	002E69030	Left Cover (7042 - XCL) (REP 1.5)		TBD	Label Kit (7041 W/ Tag 42 - RX - Norwegian)
	002E53130	Left Cover (7041 - XLA - 110V) (REP 1.5)		092S14407	Label Kit (7041W/O Tag 42 - RX - German)
				TBD	Label Kit (7041 W/ Tag 42 - RX - German)
				092S14408	Label Kit (7041W/O Tag 42 - RX - Italian)
				TBD	Label Kit (7041 W/ Tag 42 - RX - Italian)
				092S14409	Label Kit (7041W/O Tag 42 - RX - Spanish)
				TBD	Label Kit (7041 W/ Tag 42 - RX - Spanish)
				092S14410	Label Kit (7041W/O Tag 42 - RX - Portuguese)
				TBD	Label Kit (7041 W/ Tag 42 - RX - Portuguese)
				092S14412	Label Kit (7041W/O Tag 42 - RX - Finnish)
				TBD	Label Kit (7041 W/ Tag 42 - RX - Finnish)
			20	600K37040	Hardware Kit

AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

## PL 2.1 Scanner Module (7041 W/O Tag 42)



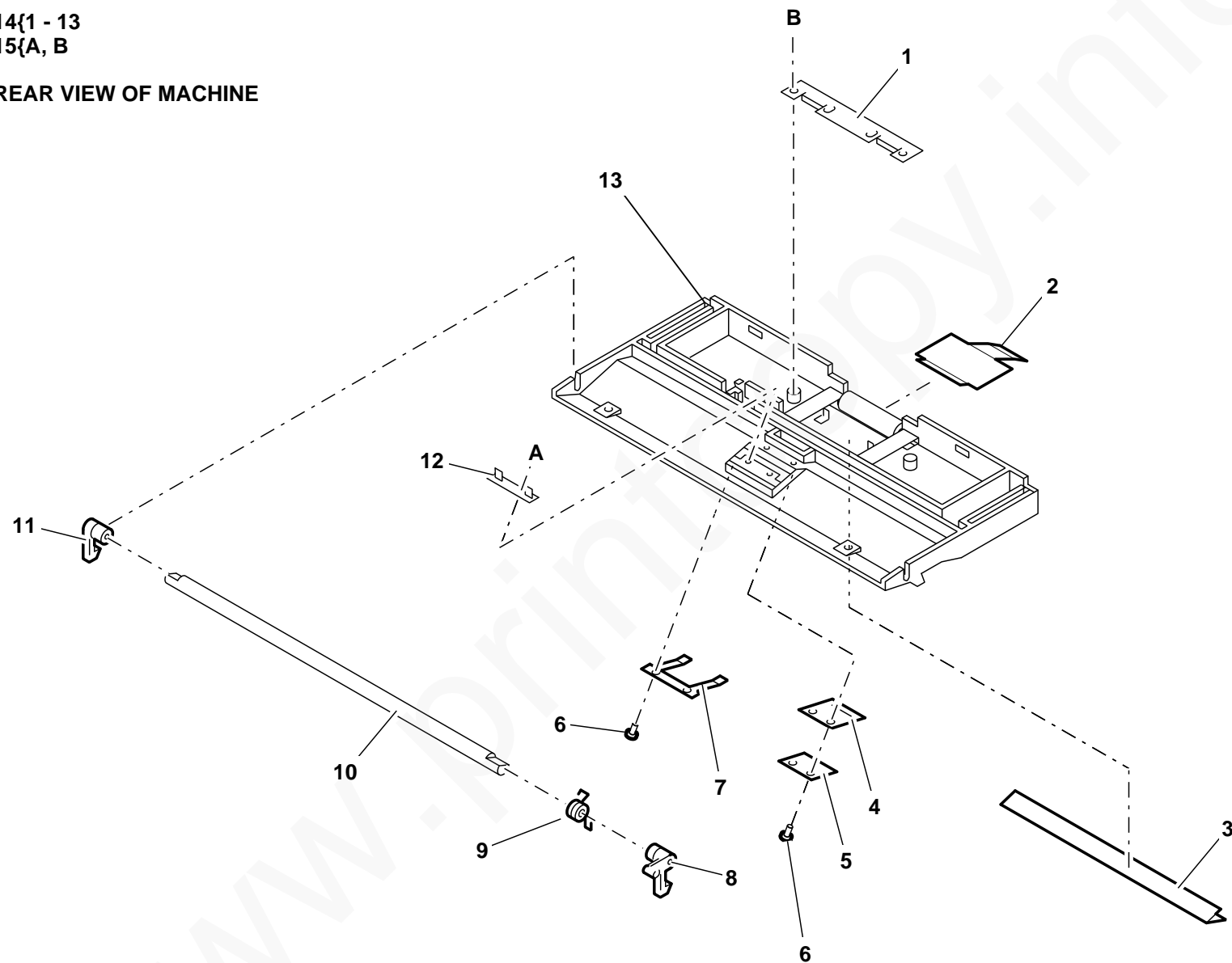
## PL 2.1 Scanner Module (7041 W/O Tag 42)

Item	Part	Description
1	600K34960	Clamp (10 ea.)
2	130E05440	Document Sensors (REP 2.4)
3	--	Guide (P/O of item 11)
4	--	Platen Glass (P/O of item 11)
5	--	Roller Guide (not spared)
6	Ref. only	Upper Scanner Assembly (See PL 2.2A)
7	101K16350	Video (CCD/LED) Module (REP 2.3)
8	--	Shield (not spared)
9	026E31810	CCD Screw
10	600K37040	Hardware Kit
11	038K08920	Guide Assembly

## PL 2.2A Scanner (upper) (7041 W/O Tag 42)

14{1 - 13  
15{A, B

REAR VIEW OF MACHINE



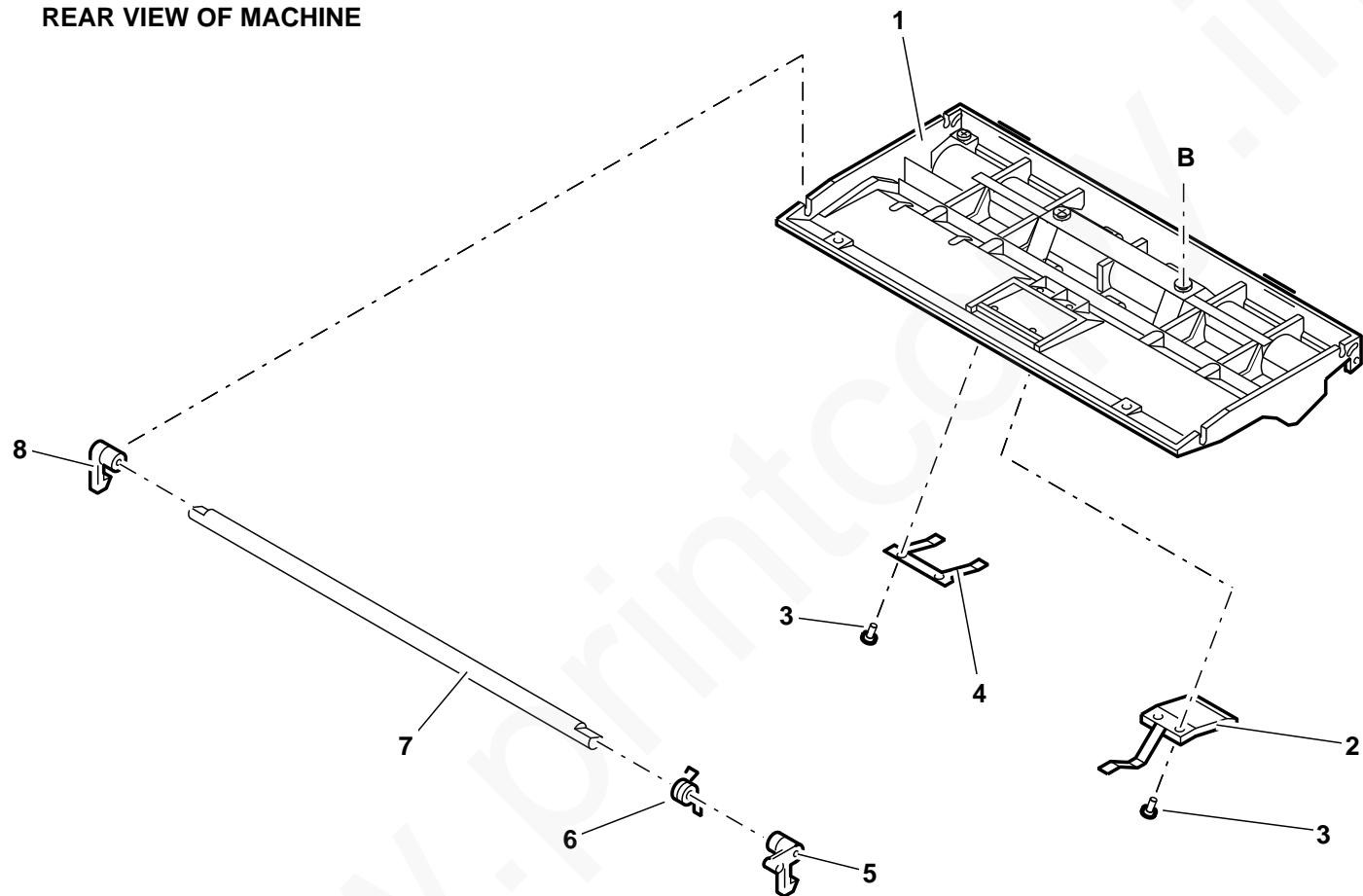
## PL 2.2A Scanner (upper) (7041 W/O Tag 42)

Item	Part	Description
1	--	Bracket (P/O item 14)
2	038E11610	Stack Guide (P/O item 14)
3	090E01220	Platen (P/O item 14)
4	009E46340	Pad Spring (P/O item 14)
5	017E05200	Retard Pad (P/O item 14) (REP 2.2)
6	600K34970	Plastic Rivet (10 ea.) (P/O item 14)
7	009E46330	ADF Spring (P/O item 14)
8	003E19890	Rear Latch (P/O item 14)
9	009E46320	Spring (P/O item 14)
10	--	Shaft (P/O item 14)
11	003E19880	Front Latch (P/O item 14)
12	--	Tensioner (P/O item 14)
13	--	Frame (P/O item 14)
14	109K00560	Upper Scanner Assembly
15	600K37040	Hardware Kit

## PL 2.2B Scanner (upper) (7042/7041 W/ Tag 42)

9{1 - 8  
10{B

REAR VIEW OF MACHINE



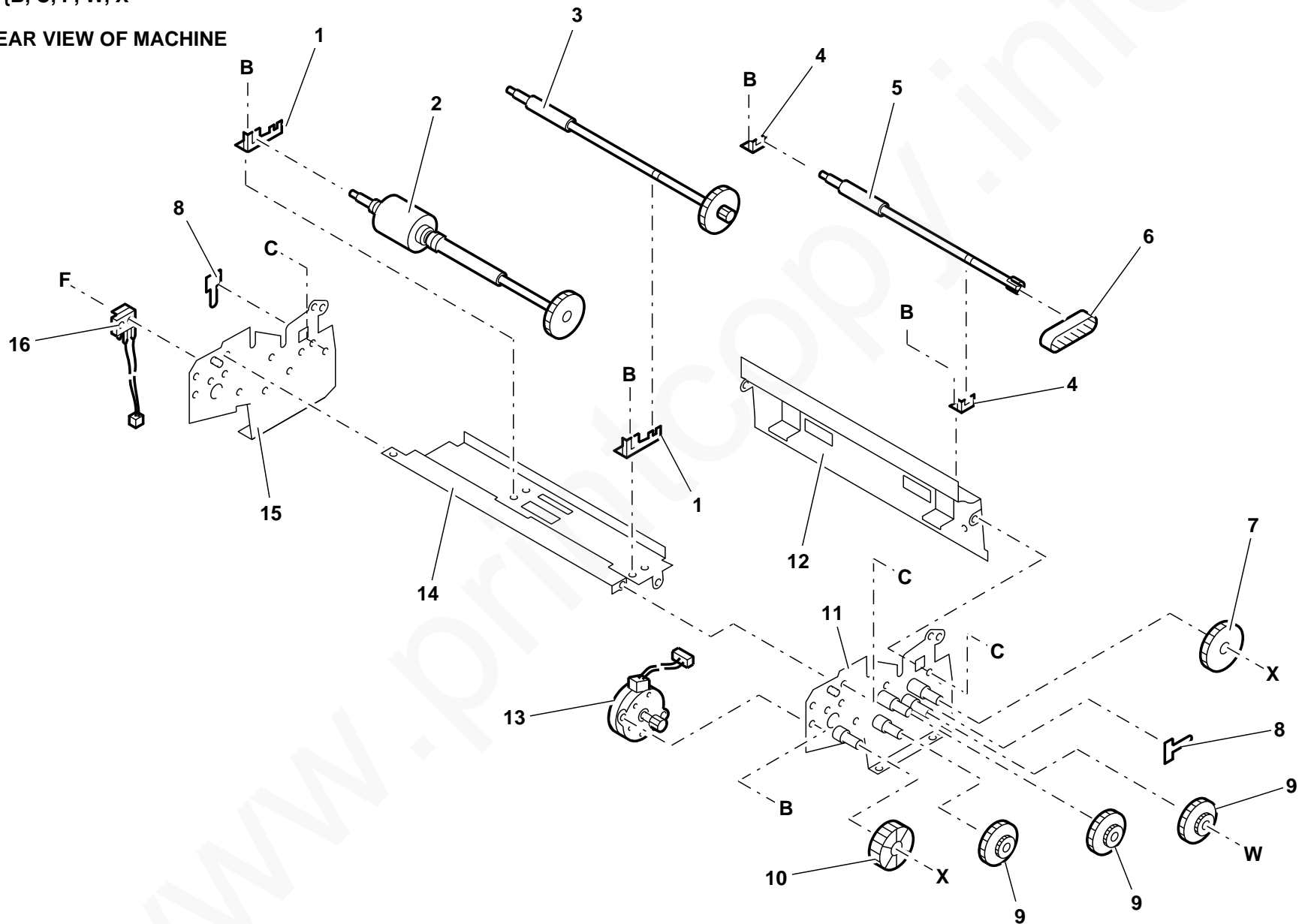
## PL 2.2B Scanner (upper) (7042/7041 W/ Tag 42)

Item	Part	Description
1	- -	Frame (P/O item 9)
2	017E05910	Retard Pad (REP 2.10)
3	600K34970	Plastic Rivet (10 ea.) (P/O item 9)
4	009E54470	ADF Spring (P/O item 9)
5	003E19890	Rear Latch (P/O item 9)
6	009E46320	Spring (P/O item 9)
7	- -	Shaft (P/O item 9)
8	003E19880	Front Latch (P/O item 9)
9	109K00671	Upper Scanner Assembly
10	600K37040	Hardware Kit

## PL 2.3A Scanner Drive and Rollers (7041 W/O Tag 42)

17{B, C, F, W, X

REAR VIEW OF MACHINE





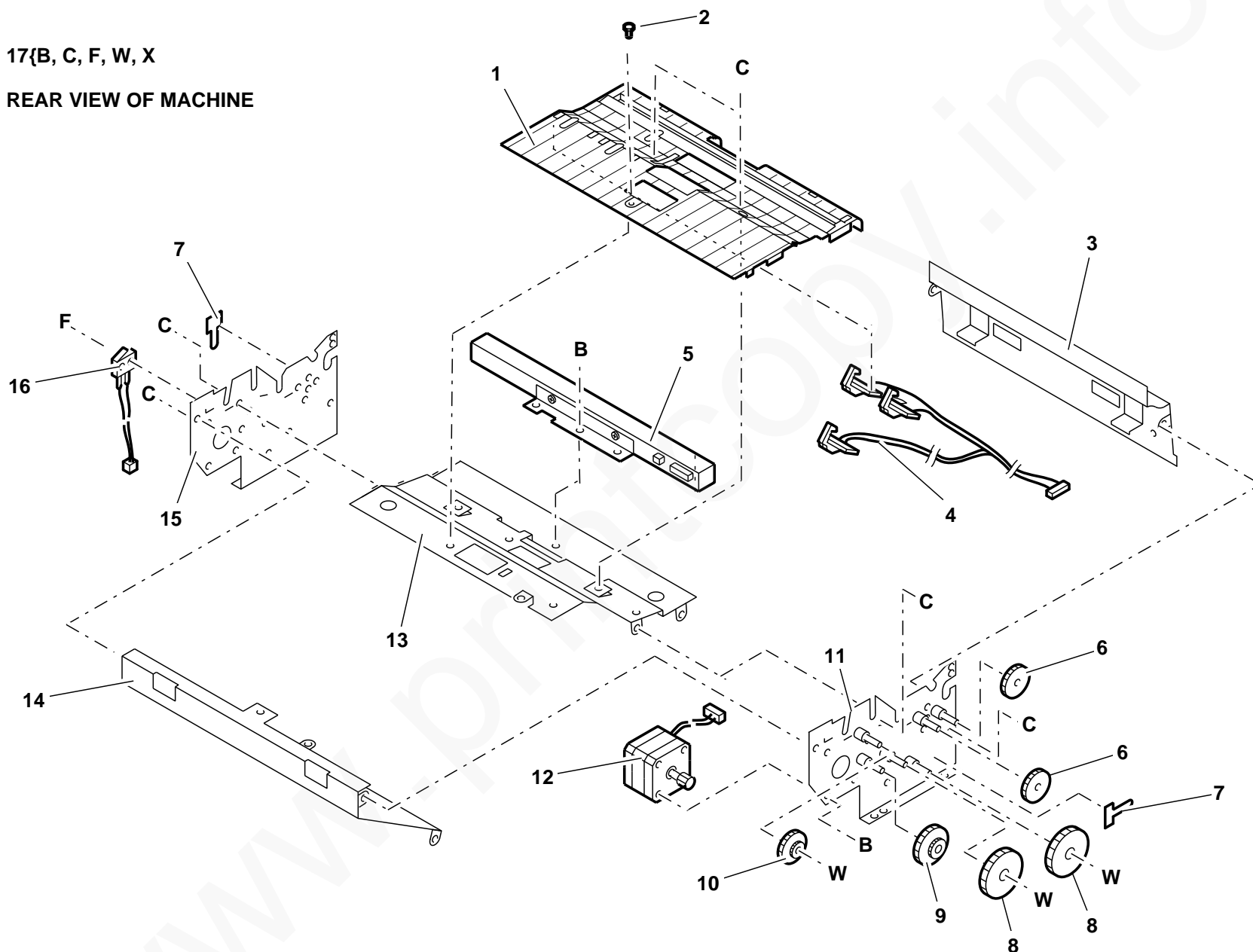
## PL 2.3A Scanner Drive and Rollers (7041 W/O Tag 42)

Item	Part	Description
1	068E47430	Shaft Support
2	022K27090	ADF Roller Assembly (REP 2.8)
3	022K27100	Feed Roller Assembly (REP 2.7)
4	068E47420	Shaft Support
5	022K27110	Exit Roller Assembly (REP 2.9)
6	023E09700	Belt
7	007E20580	Gear
8	600K34960	Clamp (10 ea.)
9	007E20570	Gear
10	007E20590	Idler Gear
11	--	Rear Frame (not spared)
12	--	Roller guide (not spared)
13	127K10160	Scan Motor (REP 2.6)
14	--	ADF Roller Guide (not spared)
15	--	Front frame (not spared)
16	003E19900	Scanner Interlock (REP 2.5)
17	600K37040	Hardware Kit

## PL 2.3B Scanner Drive and CIS (7042/7041 W/ Tag 42)

17{B, C, F, W, X

REAR VIEW OF MACHINE



## PL 2.3B Scanner Drive and CIS (7042/7041 W/ Tag 42)

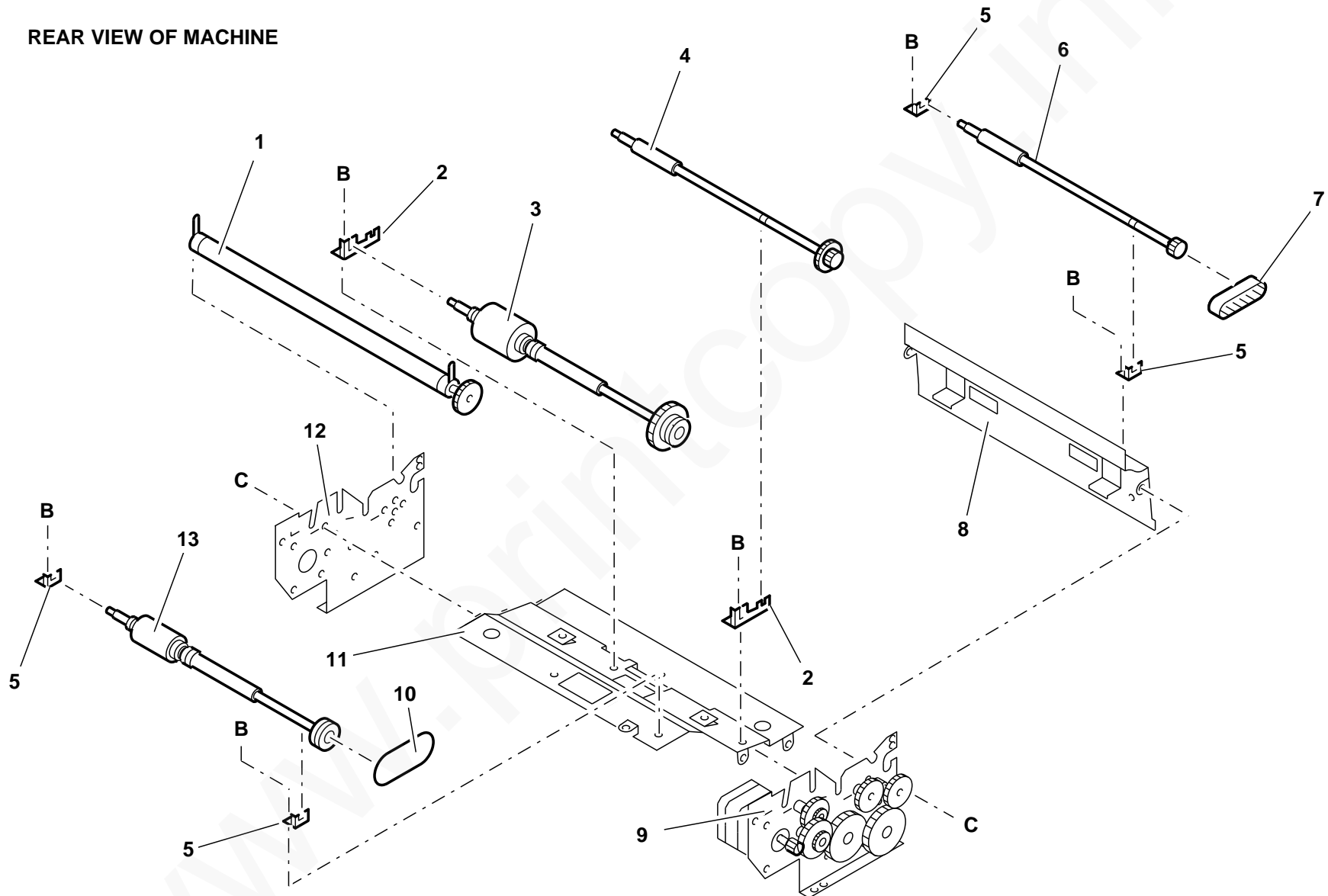
Item	Part	Description
1	038E13210	Guide
2	600K34970	Plastic Rivet (10 ea.)
3	--	Roller guide (not spared)
4	130E06320	Document Sensors (REP 2.13)
5	101K18780	Video (CIS) (REP 2.12)
6	007E27060	Idler Gear (small )
7	600K34960	Clamp (10 ea.)
8	007E27070	Idler Gear (large)
9	007E27080	Drive Gear
10	007E27090	Gear
11	--	Rear Frame (not spared)
12	127K12570	Scan Motor (REP 2.15)
13	--	ADF Roller Guide (not spared)
14	--	Shield (not spared)
15	--	Front frame (not spared)
16	003E26580	Scanner Interlock (REP 2.14)
17	600K37040	Hardware Kit



## PL 2.3C Scanner Rollers (7042/7041 W/ Tag 42)

14{B, C

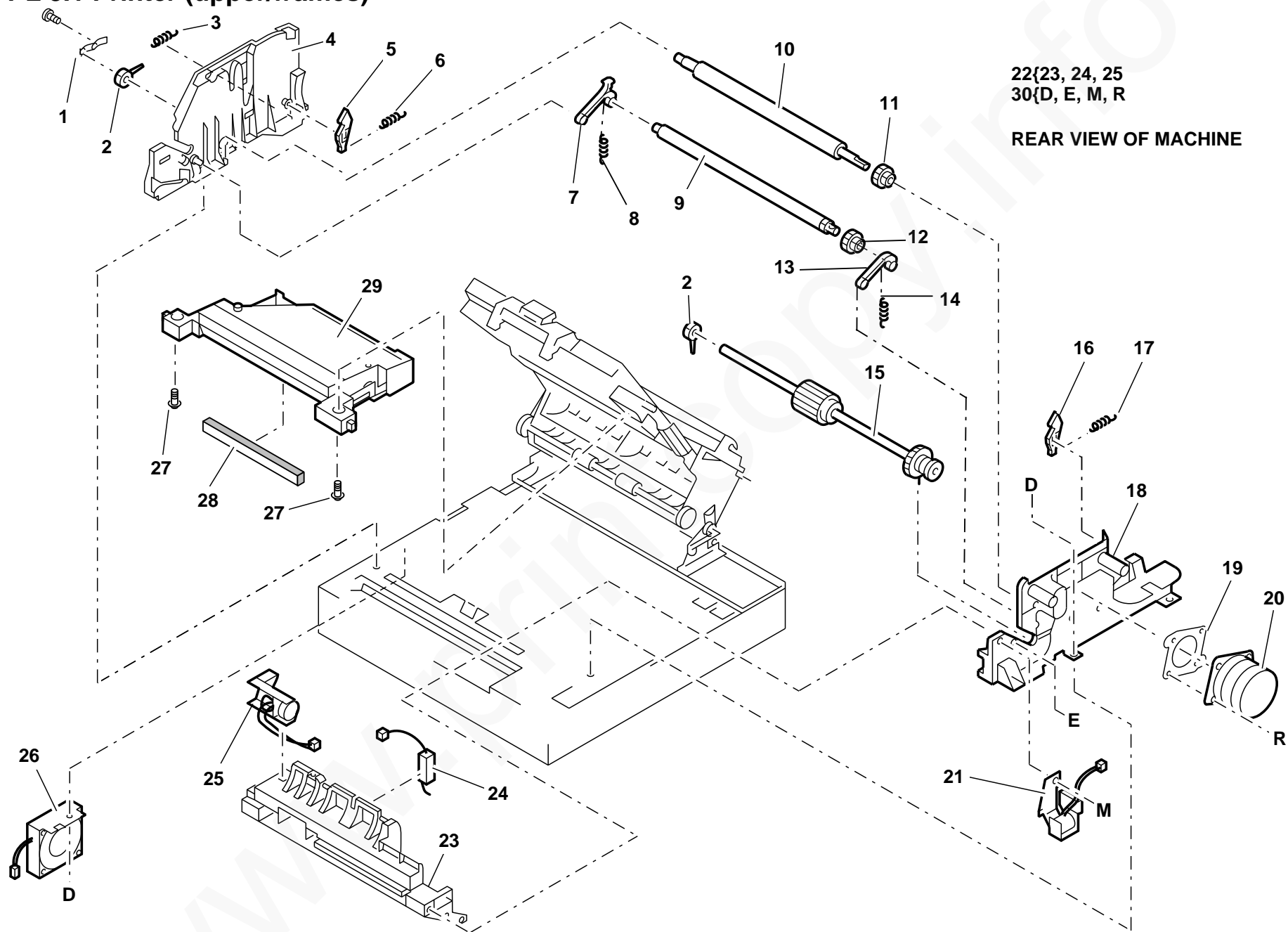
REAR VIEW OF MACHINE



## PL 2.3C Scanner Rollers (7042/7041 W/ Tag 42)

Item	Part	Description
1	022K34270	Platen Roller (REP 2.11)
2	068E47430	Shaft Support
3	022K34230	ADF Roller Assembly (REP 2.18)
4	022K34240	Feed Roller Assembly (REP 2.17)
5	068E47420	Shaft Support
6	022K34250	Exit Roller Assembly (REP 2.19)
7	023E11200	Timing Belt
8	--	Roller guide (not spared)
9	--	Rear Frame Assembly (ref. only)
10	023E11190	Drive Belt
11	--	ADF Roller Guide (not spared)
12	--	Front frame (not spared)
13	022K34260	Pre-Feed Roller (REP 2.16)
14	600K37040	Hardware Kit

## PL 3.1 Printer (upper/frames)



## PL 3.1 Printer (upper/frames)

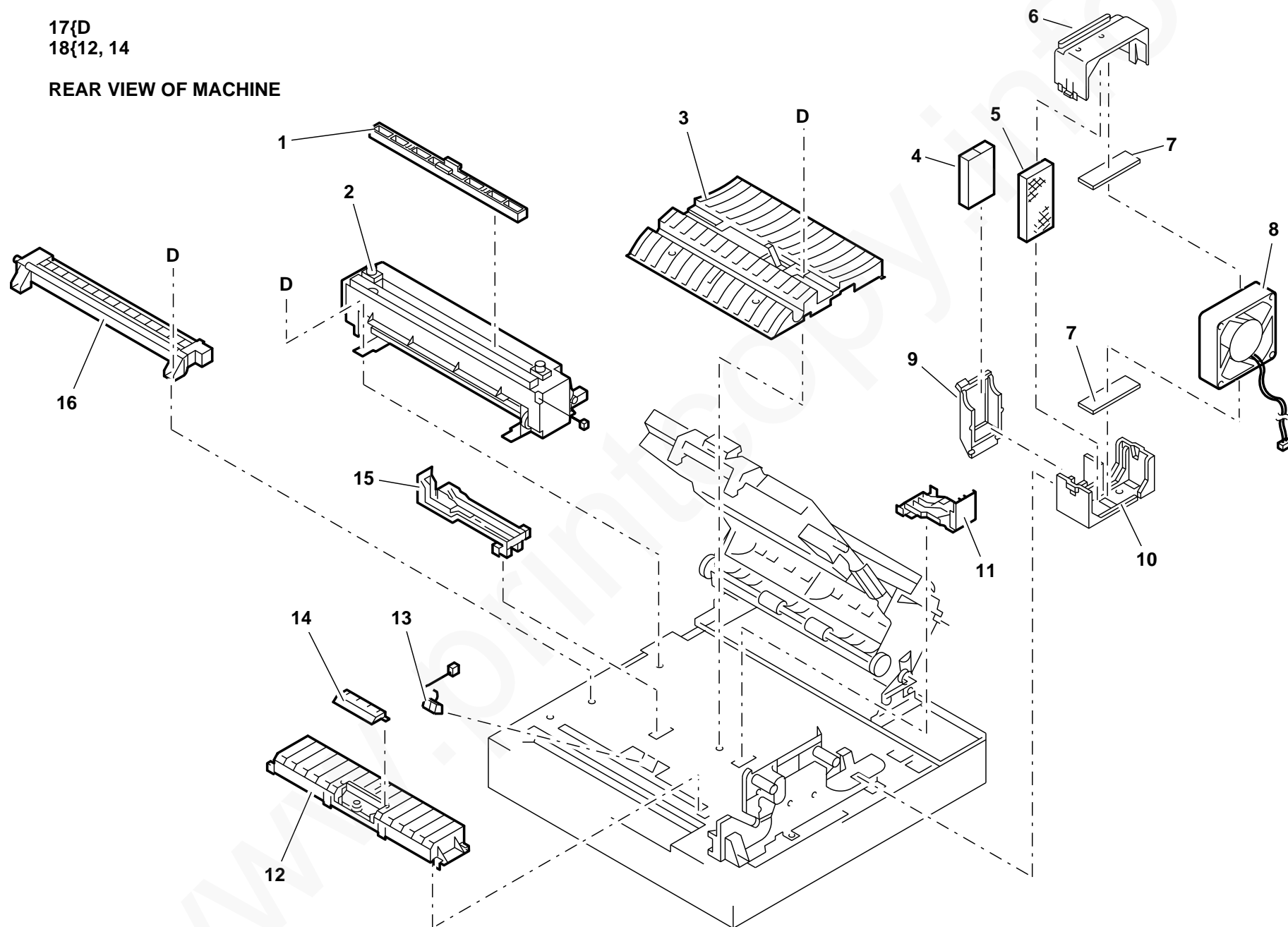
Item	Part	Description
1	--	Ground Plate (not spared)
2	013E07270	Bearing
3	009E46360	Spring
4	--	Front Frame (not spared)
5	003E19910	Print Cartridge Latch (front)
6	009E46370	Latch Spring (front)
7	031E05590	Front Arm
8	009E46350	Front Arm Spring
9	022K27320	Metal Pinch Roller Assembly
10	022E11710	Rubber Pinch Roller (REP 3.9)
11	007E18920	Pinch Roller Gear
12	007E27210	Gear
13	031E05600	Rear Arm
14	009E49900	Rear Arm Spring
15	022E11570	Paper Feed Roller (REP 3.8)
16	011E03910	Print Cartridge Latch (rear)
17	009E35780	Latch Spring (rear)
18	001E24551	Rear Frame (REP 3.14)
19	--	Bracket (not spared)
20	127K10170	Print Motor (REP 3.2)
21	121E07990	Feed Solenoid (REP 3.4) (ADJ 3.1)
22	001K28790	Right Frame assembly (7041 W/O TAG 42) (REP 3.5)
	001K37370	Right Frame assembly (7042/7041 W/ Tag 42) (REP 3.5)
23	--	Right Frame (P/O item 22)
24	--	Cassette Paper Sensor (P/O item 22)
25	003E19930	Density Control (P/O item 22) (7041 W/O TAG 42) (REP 3.6)
26	127E07710	Power Supply Fan (7041 W/O TAG 42)
27	026E31820	Screw
28	055E25740	Charge Scorotron Shield
29	122E01410	Laser (REP 3.1) (See Note 1)
30	600K37040	Hardware Kit

NOTE 1: When ordering item 29, order item 28 also.

## PL 3.2 Printer (lower)

17{D  
18{12, 14

REAR VIEW OF MACHINE





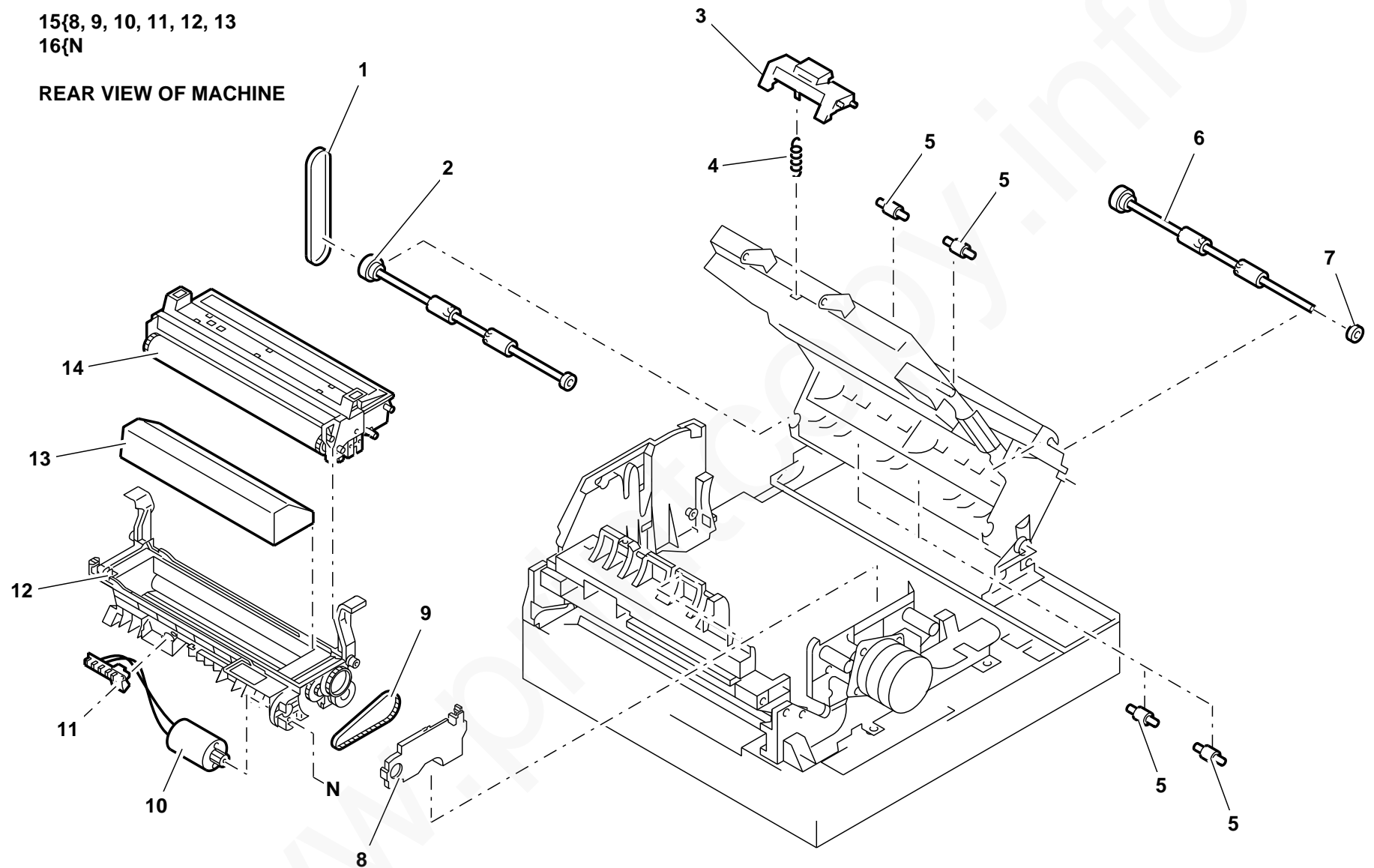
## PL 3.2 Printer (lower)

Item	Part	Description
1	019E17500	Fuser Cleaning Pad (Included with Toner cartridge)
2	126K03210	Fuser Assembly (110VAC) (USO,XCL, XLA) (REP 3.15) (ADJ 5.1)
	126K03220	Fuser Assembly (220VAC) (XLA, RX) (REP 3.15) (ADJ 5.1)
3	038E10250	Lower Paper Guide (REP 3.13)
4	053E03560	Ozone Filter (B)
5	053E02700	Ozone Filter (A)
6	--	Upper Fan bracket (not spared)
7	--	Fan Spacer (not spared)
8	127E07700	Fan (REP 3.3)
9	--	Filter Bracket (not spared)
10	--	Lower Fan Bracket (not spared)
11	114E03290	Rear HV Connector
12	--	Right Paper Guide (P/O item 18)
13	130E05010	Paper Sensor (REP 3.7)
14	038E10130	Friction Pad (P/O item 18) (REP 3.11)
15	114E03340	Front HV Connector
16	113E08800	Corotron Assembly (REP 3.10)
17	600K37040	Hardware Kit
18	038K07770	Right Paper Guide Assembly (REP 3.12)

## PL 4.1 Paper Path and Developer Assembly

15{8, 9, 10, 11, 12, 13  
16{N

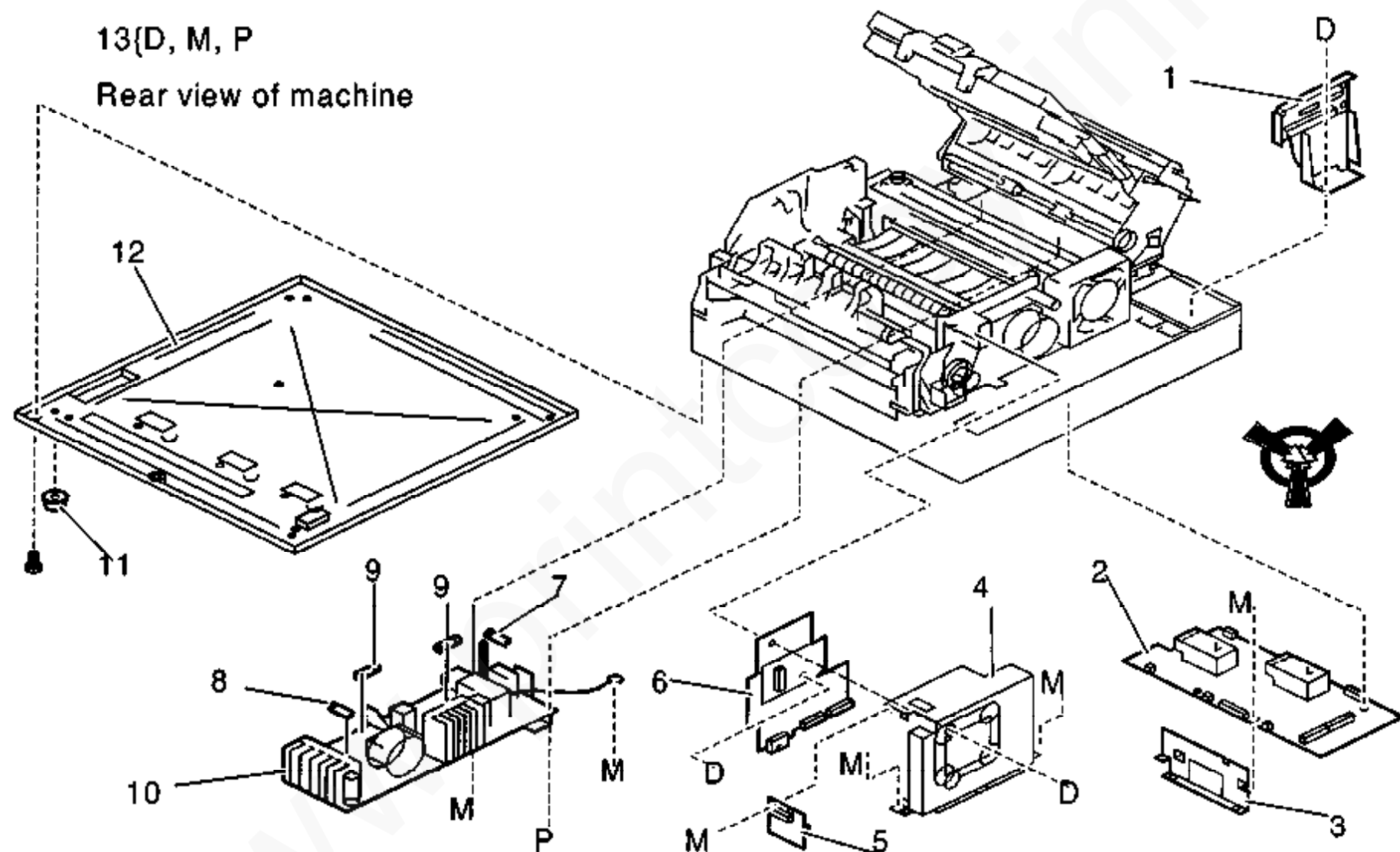
REAR VIEW OF MACHINE




## PL 4.1 Paper Path and Developer Assembly

Item	Part	Description
1	023E06880	Belt
2	022K19180	Lower Exit Roller Assembly (REP 4.1)
3	003E19920	Latch
4	009E35760	Spring
5	022E11580	Roller
6	022K19190	Upper Exit Roller Assembly (REP 4.2)
7	013E08060	Bearing
8	--	Cover (P/O item 15)
9	023E09710	Belt (P/O item 15)
10	130K51750	Motor/Sensor (P/O item 15) (REP 4.3)
11	--	Tapping Screw 3X8 (P/O item 15)
12	--	Base (P/O item 15)
13	094K02050	Initial toner (includes developer) (P/O item 15) (See Note 1)
14	013R00073	Drum Module (USO, XCL, XLA) (Includes Fuser Cleaning Pad and Ozone Filter B)
	013R00076	Drum Module (RX) (Includes Fuser Cleaning Pad and Ozone Filter B)
15	101K16370	Developer Assembly
16	600K37040	Hardware Kit

*NOTE 1: Refer to section 6 for customer consumable ordering information.*



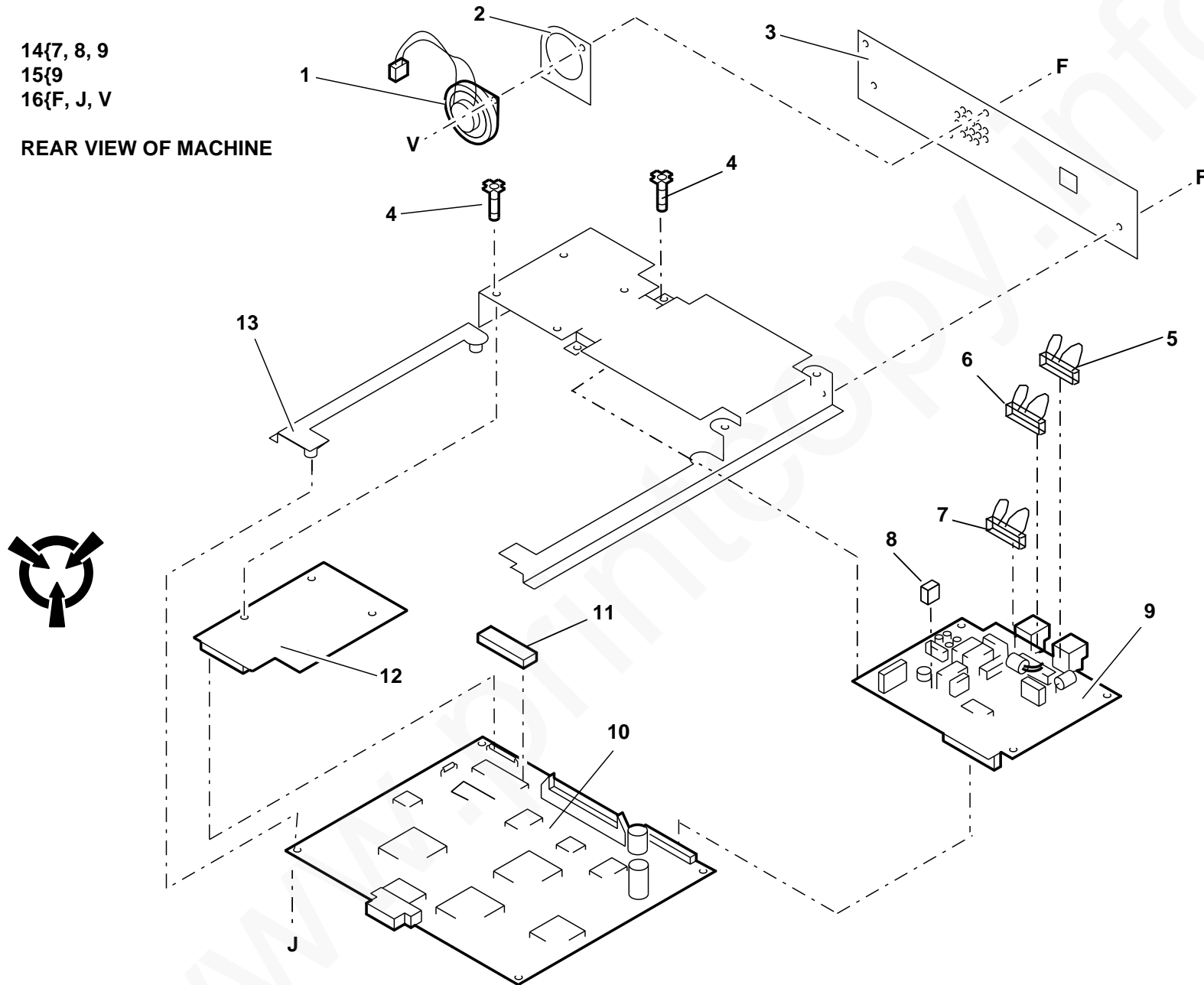
## PL 5.1 Electrical

Item	Part	Description
1	140K51560	Interconnect PWB (7041 W/O Tag 42)
	140K68930	Interconnect PWB (7042/7041 W/ Tag 42) 
2	105K07770	HV Power Supply (REP 5.8)
3	140K51550	Main Interconnect PWB
4	- -	Shield (not spared)
5	140K51541	Setup PWB (Tag 1) (REP 5.6) (ADJ 5.1) (ADJ 5.2)
	600K42680	Setup PWB Kit (Tag 1) (RX only) (includes Charge Scorotron Shield)(ADJ 5.1) (ADJ 5.2)
6	140K51570	Driver PWB (REP 5.5) (ADJ 5.1) (ADJ 5.2)
7	600K34990	Mains 110V Fuse Kit (10A) (5 ea.)
	600K35010	Mains 220V Fuse Kit (5A) (5 ea.)
8	600K35000	Fuse kit (2A - 125V) (5 ea.)
9	600K37010	Fuse Kit (3.15A - 125V) (5 ea.)
10	105K07750	LV Power Supply (110 VAC) (USO, XCL, XLA) (REP 5.7)
	105K07760	LV Power Supply (220 VAC) (7041 W/O Tag 42 - XLA, RX), (7042 - XLA) (REP 5.7)
	105K09460	LV Power Supply (220 VAC) (7041 W/ Tag 42- RX)
11	004E04850	Foot
12	- -	Bottom pan (not spared)
13	600K37040	Hardware Kit

## PL 5.3 Electrical (PWB chassis) 7042 / 7041 W/ Tag 42

14{7, 8, 9  
15{9  
16{F, J, V

REAR VIEW OF MACHINE



## PL 5.3 Electrical (PWB chassis)

### 7042 / 7041 W/ Tag 42

Item	Part	Description
1	130E05460	Speaker (REP 5.4)
2	--	Mounting Gasket (not spared)
3	--	Plate (not spared)
4	068E47470	Standoff
5	152K57290	LCU Jumper (CN3) (RX - except SE) (See note 1)
6	152K57280	LCU Jumper (CN4) (RX) (See note 1)
7	152K57140	LCU Jumper (CN5) (RX - DE) (P/O item 9) (See note 1)
	152K57150	LCU Jumper (CN5) (USO, XCL) (P/O item 9)
	152K62090	LCU Jumper (CN5) (XLA) (P/O item 9)
8	113P80666	LCU Shorting Pin (RX) (P/O Item 9) (See note2)
9	--	LCU PWB (7041 W/ Tag 42) (P/O Item 14)
	--	LCU PWB (7042) (P/O Item 15)
10	140K65820	Main PWB (W/O ROM1)
11	537E42181	ROM1 (IC8) (USO, XCL, XLA) (REP 5.2)
	537E39680	ROM1 (IC8) (RX - DE) (REP 5.2)
	537E39720	ROM1 (IC8) (RX - BE) (REP 5.2)
	537E39740	ROM1 (IC8) (RX - CH) (REP 5.2)
	537E39750	ROM1 (IC8) (RX - GB) (REP 5.2)
	537E39760	ROM1 (IC8) (RX - IE) (REP 5.2)
	537E39790	ROM1 (IC8) (RX - AT) (REP 5.2)
	537E39810	ROM1 (IC8) (RX - DK) (REP 5.2)
	537E39830	ROM1 (IC8) (RX - FI) (REP 5.2)
	537E39840	ROM1 (IC8) (RX - GR) (REP 5.2)
	537E39850	ROM1 (IC8) (RX - NL) (REP 5.2)
	537E39860	ROM1 (IC8) (RX - NO) (REP 5.2)
	537E39880	ROM1 (IC8) (RX - PT) (REP 5.2)
	537E39890	ROM1 (IC8) (RX - ES) (REP 5.2)
	537E39900	ROM1 (IC8) (RX - SE) (REP 5.2)
	537E39910	ROM1 (IC8) (RX - IT) (REP 5.2)

12	160K01500	1.5M Upgrade Kit PWB (See note 3)
13	--	PWB chassis (not spared)
14	140K51580	LCU PWB (7041 W/ Tag 42) (RX - DE) (REP 5.3)
	140K51730	LCU PWB (7041 W/ Tag 42) (RX - AT, DK, FI, GR, NL, NO, PT, ES, SE, IT) (REP 5.3)
	140K51740	LCU PWB (7041 W/ Tag 42)(RX - BE, CH, GB, IE, FR, EEO-UK) (REP 5.3)
15	140K65830	LCU PWB (7042) (USO, XCL) (REP 5.3)
	140K61190	LCU PWB (7042)(XLA) (REP 5.3)
16	600K37040	Hardware Kit

*NOTE 1: Refer to section 7 for RX connector pin assignments to correctly configure the LCU jumper for each specific country.*

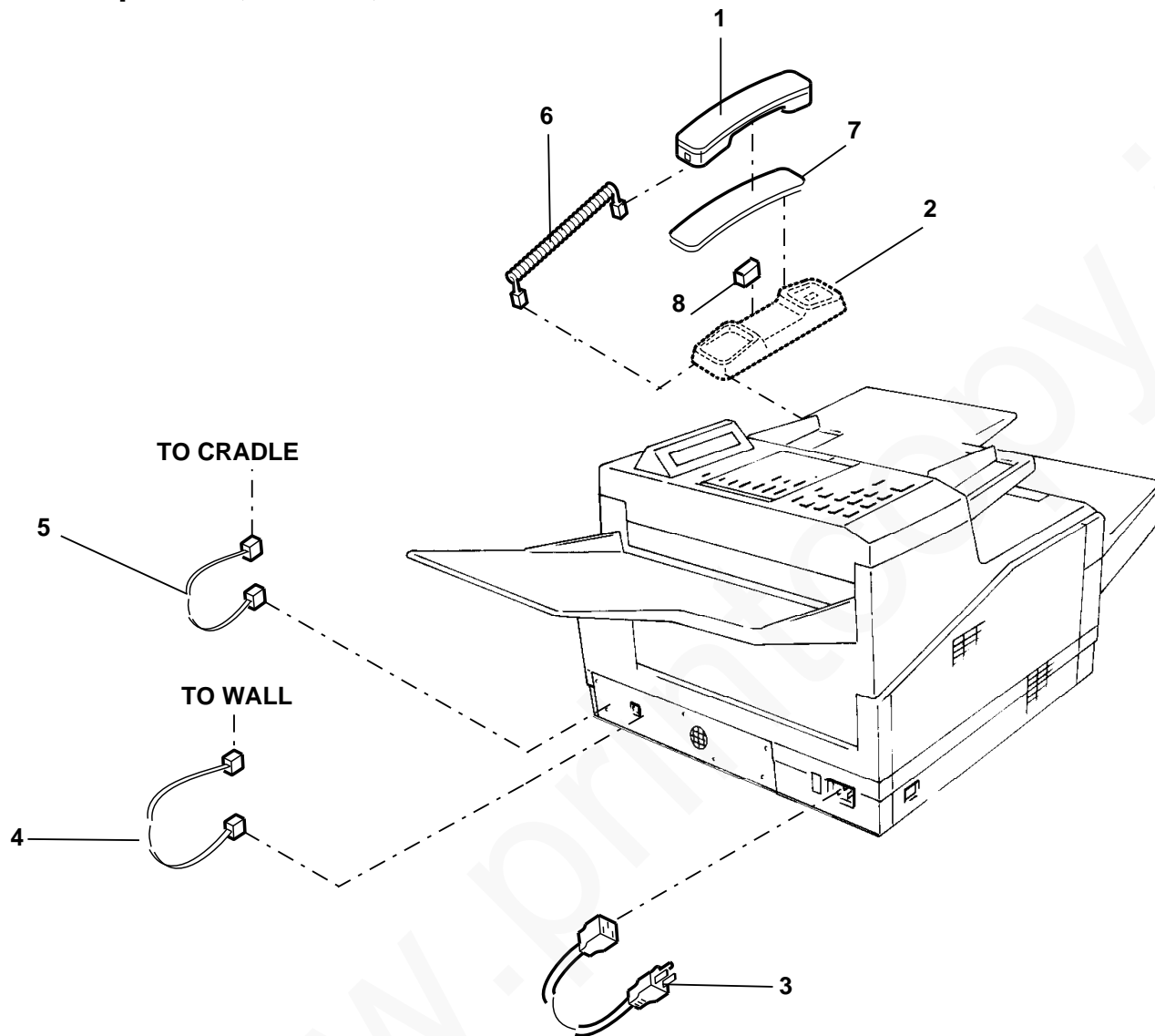
*NOTE 2: Refer to section 6 for RX LCU PWB shorting pin locations for each specific country.*

*NOTE 3: Refer to section 6 for the installation procedure for the Memory Option Kit.*



AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy,  
NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom,  
IE=Ireland, MY=Malaysia, TU=Turkey

## PL 5.4 Telephones, Cables, and Cords





## PL 5.4 Telephones, Cables, and Cords

### Item Part Description

- 1 110K05520 Handset (USO, XCL)  
 110K04950 Handset with keypad/cord (RX - GB)  
 110K05880 Handset with keypad/cord (RX - NL)  
 110K05910 Handset with keypad/cord (RX - DE)

- 2 062K05900 Handset cradle (USO, XCL)  
 062K05930 Handset cradle (RX, XLA)  
 3 117K14230 Power Cord 110V  
 152S05125 Power Cord (RX - DE, BE, AT, FI, GR, NL, NO, PT, ES, SE, IT)  
 152S05126 Power Cord (RX - GB, IE)  
 152S05127 Power cord (RX - DK)  
 152S05128 Power Cord (RX - CH)  
 152K56580 Power cord 220V 2.5 inch (XLA)

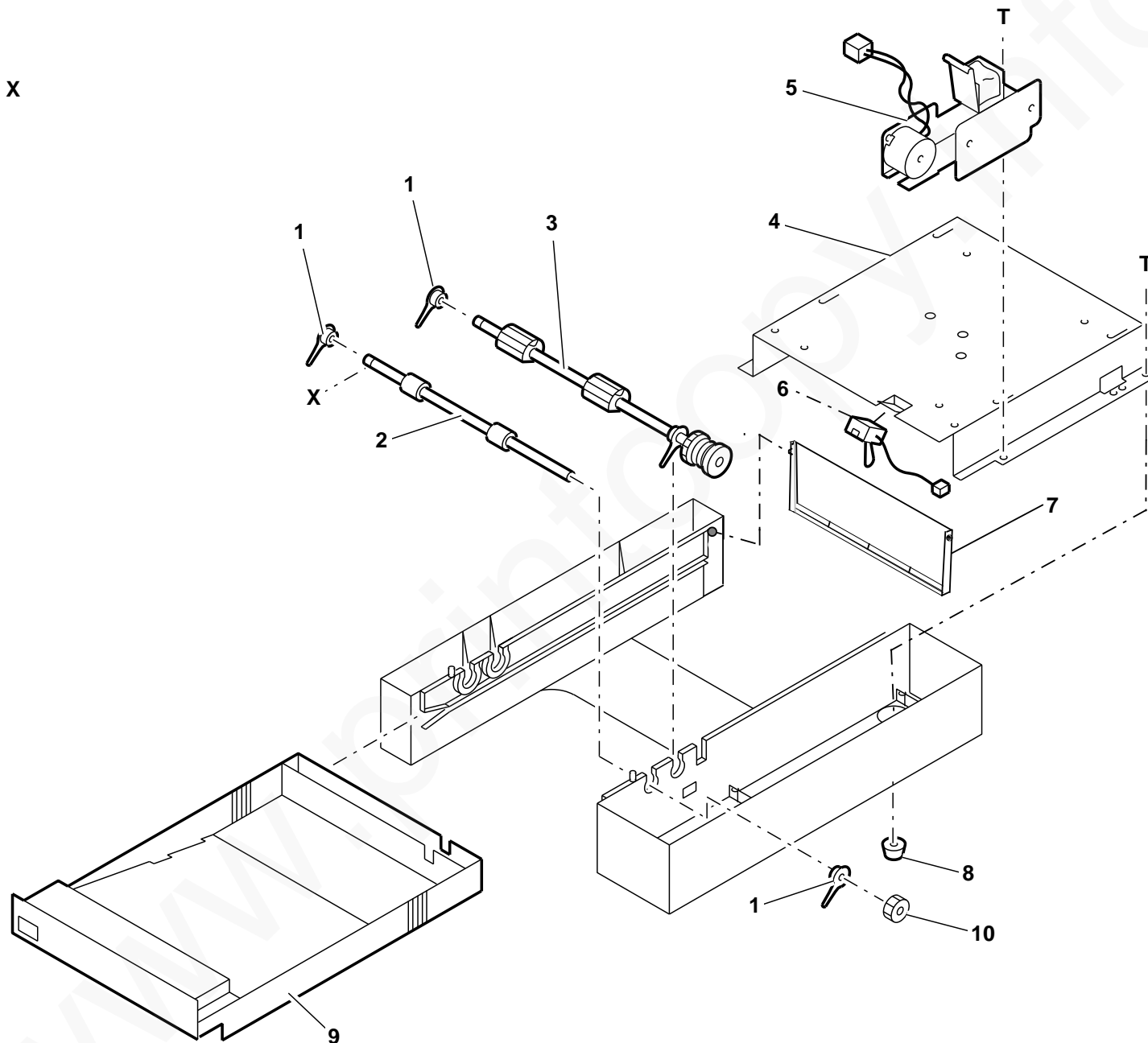
- 4 117E06260 Tel Line Cable (USO, XCL,XLA)  
 117S26608 Tel Line Cable (RX - IE)  
 117S26634 Tel Line Cable (RX - DE)  
 117S26638 Tel Line Cable (RX - PT, ES)  
 117S26656 Tel Line Cable (RX - NL)  
 117S26680 Tel Line Cable (RX - NO)  
 117S26658 Tel Line Cable (RX - FI)  
 117S26679 Tel Line Cable (RX - DK)  
 117S26660 Tel Line Cable (RX - IT)  
 117S26662 Tel Line Cable (RX - GR)  
 117S26663 Tel Line Cable (RX - BE)  
 117S26664 Tel Line Cable (RX - AT)  
 117S26665 Tel Line Cable (RX - CH)  
 117S26667 Tel Line Cable (RX - FR, EEO - AU, UK)  
 117S26671 Tel Line Cable (RX - GB)  
 117S26672 Tel Line Cable (RX - SE)  
 5 152K52490 Handset Cable (USO, XCL)  
 6 117E11080 Handset Curly Cord (USO, XCL)  
 7 004E05410 Tel Pad (RX - GB)  
 8 002E53980 Adapter Onhook (RX - DE)



AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

## PL 6.1 Auxiliary Tray

12{T, X



## PL 6.1 Auxiliary Tray

Item	Part	Description
1	013E07270	Bearing
2	006E33490	Paper Guide Roller
3	022K27150	Paper Feed Roller (ADJ 6.1)
4	- -	Chassis
5	015E28430	Drive Motor (Includes Feed Solenoid) (ADJ 6.1)
6	130E05470	Auxiliary Paper Feed Sensor
7	002E58730	Cover
8	004E04860	Foot
9	009R89600	Auxiliary Tray Paper Cassette (Letter) (USO, XCL, XLA)
	009R89601	Auxiliary Tray Paper Cassette (Legal) (USO, XCL, XLA)
	009R89602	Auxiliary Tray Paper Cassette (A4) (RX)
10	- -	Gear (Not spared)
11	097K12910	Auxiliary Tray Kit (Letter] (USO, XCL, XLA) Not spared - information only)
	097K12930	Auxiliary Tray Kit (A4) (RX) (Not spared - information only)
12	600K37040	Hardware Kit

## Common Hardware

Item	Part	Description
1	600K37040	Hardware kit (includes items A - X)
A	--	Screw (FLT 2 x 4)
B	--	Screw (FLT 3 x 5)
C	--	Screw (FLT 3 x 6)
D	--	Screw (FLT 3 x 8)
E	--	Screw (FLT 3 x 10)
F	--	Screw (B 3 x 5)
G	--	Screw (B 3 x 12)
H	--	Screw (SM 3 x 5)
J	--	Screw (SM 3 x 8)
K	--	Screw (P 2 x 10)
L	--	Screw (P 3 x 5)
M	--	Screw (SWM 3 x 8)
N	--	Screw (SWM 3 x 10)
P	--	Screw (SWM 4 x 8)
R	--	Screw (SWM 4 x 12)
S	--	Screw (bottom pan )
T	--	Screw (T 4 x 12)
U	--	Nut (Nut plate)
V	--	Nut (Hexagon nut)
W	--	E - ring (E4)
X	--	E - ring (E5)

<u>Part Number</u>	<u>PL Loc.</u>	<u>Part Number</u>	<u>PL Loc.</u>	<u>Part Number</u>	<u>PL Loc.</u>	<u>Part Number</u>	<u>PL Loc.</u>	<u>Part Number</u>	<u>PL Loc.</u>
001E24550	3.1	007E27060	2.3B	022K34240	2.3C	092S14405	1.1	110K05730	5.4
001K28790	3.1	007E27070	2.3B	022K34250	2.3C	092S14406	1.1	110K05830	5.4
001K37370	3.1	007E27080	2.3B	022K34260	2.3C	092S14407	1.1	110K05860	5.4
002E52880	1.1	007E27090	2.3B	022K34270	2.3C	092S14408	1.1	110K05870	5.4
002E52890	1.1	007E27210	3.1	023E06880	4.1	092S14409	1.1	110K05882	5.4
002E52900	1.1	009E35760	4.1	023E09700	2.3A	092S14410	1.1	110K05890	5.4
002E52910	1.1	009E35780	3.1	023E09710	4.1	092S14412	1.1	110K05900	5.4
002E52920	1.1	009E46320	2.2A, 2.2B	023E11190	2.3C	094K02050	4.1	110K05910	5.4
002E52930	1.1	009E46330	2.2A	023E11200	2.3C	097K12910	6.1	113P80666	5.2, 5.3
002E53050	1.1	009E46340	2.2A	026E31810	2.1	097K12930	6.1	113E08800	3.2
002E53120	1.1	009E46350	3.1	026E31820	3.1	097K12970	5.2	114E03290	3.2
002E53130	1.1	009E46360	3.1	031E05590	3.1	097K12980	5.2	114E03340	3.2
002E53140	1.1	009E46370	3.1	031E05600	3.1	097K13480	5.2	117E06260	5.4
002E53150	1.1	009E49900	3.1	038E10130	3.2	097K17340	5.2, 5.3	117E11080	5.4
002E53160	1.1	009E54470	2.2B	038E10250	3.2	101K16340	1.1	117K14230	5.4
002E53170	1.1	009R89600	6.1	038E11590	1.1	101K16350	2.1	117S26608	5.4
002E53980	5.4	009R89601	6.1	038E11610	2.2A	101K16370	4.1	117S26634	5.4
002E58730	6.1	009R89602	6.1	038E13200	1.1	101K16530	1.1	117S26638	5.4
002E69010	1.1	011E03910	3.1	038E13210	2.3B	101K17850	1.1	117S26656	5.4
002E69020	1.1	011E04730	1.1	038K07770	3.2	101K17860	1.1	117S26658	5.4
002E69030	1.1	011E05250	1.1	038K08920	2.1	101K18780	2.3B	117S26660	5.4
002E69040	1.1	013E07270	3.1, 6.1	048E00010	1.1	101K18790	1.1	117S26662	5.4
002E69050	1.1	013E08060	4.1	050E08830	1.1	101K18800	1.1	117S26663	5.4
002E69060	1.1	013R00073	4.1	050K14760	1.1	101K18810	1.1	117S26664	5.4
002E69070	1.1	013R00076	4.1	050K14770	1.1	101K18820	1.1	117S26665	5.4
002E69080	1.1	015E28430	6.1	050K14960	1.1	105K07750	5.1	117S26667	5.4
003E19880	2.2A, 2.2B	017E05200	2.2A	050K19550	1.1	105K07760	5.1	117S26671	5.4
003E19890	2.2A, 2.2B	017E05910	2.2B	053E02700	3.2	105K07770	5.1	117S26672	5.4
003E19900	2.3A	019E17500	3.2	053E03560	3.2	105K09460	5.1	117S26679	5.4
003E19910	3.1	019E23860	5.2	055E25740	3.1	109K00560	2.2A	117S26680	5.4
003E19920	4.1	022E11570	3.1	062K05900	5.4	109K00670	2.2B	121E07990	3.1
003E19930	3.1	022E11580	4.1	062K05930	5.4	110K04950	5.4	122E01410	3.1
003E26580	2.3B	022E11710	3.1	068E47420	2.3A, 2.3C	110K05000	5.4	126K03210	3.2
004E04850	5.1	022K19180	4.1	068E47430	2.3A, 2.3C	110K05010	5.4	126K03220	3.2
004E04860	6.1	022K19190	4.1	068E47470	5.2, 5.3	110K05021	5.4	127E07700	3.2
004E05410	5.4	022K27090	2.3A	090E01220	2.2A	110K05091	5.4	127E07710	3.1
006E33490	6.1	022K27100	2.3A	092S14400	1.1	110K05180	5.4	127K10160	2.3A
007E18920	3.1	022K27110	2.3A	092S14401	1.1	110K05520	5.4	127K10170	3.1
007E20570	2.3A	022K27150	6.1	092S14402	1.1	110K05611	5.4	127K12570	2.3B
007E20580	2.3A	022K27320	3.1	092S14403	1.1	110K05621	5.4	130E05010	3.2
007E20590	2.3A	022K34230	2.3C	092S14404	1.1	110K05721	5.4	130E05440	2.1

<b>Part Number</b>	<b>PL Loc.</b>	<b>Part Number</b>	<b>PL Loc.</b>
130E05460	5.2, 5.3	537E32930	5.2
130E05470	6.1	537E32940	5.2
130E06320	2.3B	537E32950	5.2
130K51750	4.1	537E32960	5.2
140K51541	5.1	537E32970	5.2
140K51550	5.1	537E32980	5.2
140K51560	5.1	537E32990	5.2
140K51570	5.1	537E33000	5.2
140K51580	5.2, 5.3	537E33010	5.2
140K51590	5.2	537E33020	5.2
140K51730	5.2, 5.3	537E33030	5.2
140K51740	5.2, 5.3	537E39630	5.3
140K52640	5.2	537E39680	5.3
140K65820	5.3	537E39720	5.3
140K65830	5.3	537E39740	5.3
140K61190	5.2, 5.3	537E39750	5.3
140K68930	5.1	537E39760	5.3
152K52490	5.4	537E39790	5.3
152K56580	5.4	537E39810	5.3
152K57140	5.2, 5.3	537E39830	5.3
152K57150	5.2, 5.3	537E39840	5.3
152K57280	5.2, 5.3	537E39850	5.3
152K57290	5.2, 5.3	537E39860	5.3
152K62090	5.2, 5.3	537E39880	5.3
152S05125	5.4	537E39890	5.3
152S05126	5.4	537E39900	5.3
152S05127	5.4	537E39910	5.3
152S05128	5.4	600K34960	2.1, 2.3A, 2.3B
537E29251	5.2		
537E29260	5.2	600K34970	2.2A, 2.2B
537E31960	5.2	600K34990	5.1
537E31970	5.2	600K35000	5.1
537E31980	5.2	600K35010	5.1
537E31990	5.2	600K37010	5.1
537E32000	5.2	600K37040	All
537E32870	5.2	600K42680	5.1
537E32880	5.2		
537E32890	5.2		
537E32900	5.2		
537E32910	5.2		
537E32920	5.2		

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- LED Test (06) [6-12](#)
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## 6. General Procedures/Information

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### Introduction

The following is a description of the information contained within this section.

General Procedures discusses the user and service parameter options and country defaults settings for each option., It contains a description and features of the Setup tool.

Diagnostic procedures contains information about the machines internal diagnostic test, along with the operational procedures. This section also covers two feature using the setup tool.

When you suspect a machine is functioning outside the range of its specifications, refer to product specifications. If the problem is a result of space, electrical, or environmental problems, call for management or sales assistance as needed.

Special tools and consumables contains a listing of the required tools and supplies needed to properly repair and maintain the machine.

Changes in configuration to the machine are assigned a Tag/MOD number. Information about a specific modification is found in the Tag/MOD Index within Tag/MOD Information.

Other General Information contains lubrication procedures, scheduled maintenance information and signal name mnemonics.

Installation and Removal provides the procedures required to install the machine and customer options.

## General Procedures

### User Parameter Options

User options can be set by the customer and the service technician. You may desire to change these features if the machine does not perform to meet the customer needs. Reference Table 1. for User Parameter Options and Table 2. for User Parameter Defaults.

#### Procedure

1. Open the access panel.
2. Press the [Program] key.
3. Press the [Redial/ ] key once to display Parameter Set.
4. Press the [Start] key. The LCD prompts you to enter an option number.
5. Enter the option number you desire from Table 1.

**NOTE:** Pressing the [Pause/ ] key will scroll thru the parameter numbers.

6. Pressing the \* or the # key will change the setting.
7. Press [Start] to enter the selection.
8. Press the [Report] key to print a user options report for verification of a setting.

**NOTE:** Reference Diagnostic procedures for alternative methods of printing the options report.

**Table 1. User Parameter Options**

No. Note	Parameters	Options
00	Activity report	ON/OFF
02	Transmission report	ON/ERROR/OFF
03	Listen to ring	ON/OFF
04	Auto answer (7042 & 7041 W/ Tag 42)	ON/OFF
05	Auto receive in manual mode	ON/OFF
06	Manual mode receive delay	4 -12 Rings
07	Resolution default	Standard/Fine
08	Copy resolution	Not selected Standard Fine
10	Header print	OFF Above data Within data
11	Number of redials	7041 W/O Tag 42: 2, 5, 8 Redials 7042 & 7041 W/ Tag 42: 1-10 Redials
15	Secure transmission	OFF/ON
16	Junk mail eliminator	OFF/ON
19	Delete receive documents - (Documents received to memory).	After print By file delete
20	Resend on errors - (Retransmit memory transmission when errors occur).	ON/OFF
21	Dial method	Tone, 10PPS, 16PPS, 20PPS
22	Document length	1m/10m
23	Print reduction	OFF - 100% ON - 96%
24	Calendar format	YY-MM-DD DD-MM-YY MM-DD-YY
25	Month indication	Name/Numeric
26	Receive interval - Wait time after dialing four groups when performing a group dialing.	0 MIN - 5 MIN
27	ECM mode	ON/OFF
28	Language	7041 W/O Tag 42: Primary/Secondary 7042 & 7041 W/ Tag 42: Primary + 3 others
29	Clock format	12 hour/24hour
31	Auto copy reduction (7042 & 7041 W/ Tag 42)	ON/OFF

**NOTE:** Table 1 does not include unused option numbers.

**Table 2. User Parameter Defaults**

No. Note	Parameter Default																			
	USO XCL XLA	AT	AU	BE	CH	DE	DK	ES	FI	GB	GR	IE	IT	MY	NL	NO	NZ	PT	SE	SG
00	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
02	ON	ON	Error	ON	ON	Error	ON	Error	Error	ON	Error	ON	ON	Error	ON	ON	Error	ON	Error	Error
03	ON	Off	Off	Off	ON	Off	Off	Off	Off	Off	ON	Off	Off	Off	Off	Off	Off	Off	Off	Off
04	ON	ON	ON	ON	N/A	N/A	ON	ON	ON	ON	ON	ON	ON	ON	Off	ON	ON	ON	ON	ON
05	ON	N/A	ON	ON	N/A	N/A	Off	ON	ON	ON	ON	ON	ON	ON	Off	ON	ON	ON	ON	ON
06	6	N/A	6	6	N/A	N/A	6	6	6	6	6	6	6	6	N/A	8	N/A	6	6	6
07	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
08	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE	FINE
10	W. D.	W. D.	W. D.	W. D.	W. D.	N/A	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.	W. D.
11	5	N/A	5	2	5	N/A	5	5	5	5	5	2	3	5	5	5	5	2	5	5
15	Off	Off	Off	Off	Off	N/A	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
16	Off	Off	Off	Off	Off	N/A	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
19	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.
20	ON	ON	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
21	TONE	TONE	TONE	10 PPS	TONE	TONE	TONE	TONE	TONE	TONE	TONE	TONE	TONE	TONE	TONE	TONE	TONE	10 PPS	TONE	TONE
22	1	1	1	1	1	1	N/A	1	1	1	1	1	1	1	1	1	1	1	1	1
23	ON	ON	Off	Off	Off	Off	Off	Off	Off	ON	Off	ON	ON	Off	ON	Off	Off	ON	Off	Off
24	M/D/Y	D/M/Y	Fixed	D/M/Y	D/M/Y	Fixed	Fixed	Fixed	Fixed	D/M/Y	Fixed	D/M/Y	D/M/Y	Fixed	D/M/Y	D/M/Y	Fixed	D/M/Y	Fixed	Fixed
25	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name
26	1	5	1	5	5	N/A	1	1	1	5	1	5	5	1	5	1	1	5	1	1
27	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
28	PRIM	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
29	12	24	24	N/A	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
31	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off

NOTE: Table 1 does not include option numbers that are not used.

AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

## Service Mode

Service mode consists of four different features, Service Parameter , Image Memory Initialization, Service Diagnostic test and Protocol Monitor . Each of these areas are accessed by a preset four digit code (Reference Table 1).

- Service parameters allow for the service representative to modify the basic machine operation to satisfy the customer needs.
- Image memory initialization will printout all documents stored in memory, then clear the memory.
- Service diagnostic test mode consists of thirteen different test to help diagnose problems.
- Protocol monitor displays the protocol signals that are exchanged between the terminals whenever communications is attempted.

**Table 1. Service Features**

Access Code	Service Features
0704	Service Parameters
7777	Image Memory Initialization
1101	Service Diagnostic Test
0618	Protocol Monitor

## Procedure

### Enter the service mode

1. Open the access cover.
2. Press the [Service] key.
3. Enter the desired four digit code from Table 1.
4. Press the [Start] key.

*NOTE: All access code operations will be terminated by pressing the [Stop] key, except (0618) protocol monitor. To exit protocol monitor repeat the procedure.*

### Exit the service mode

1. Press the [Stop] key.

### **NOTES:**

- *If no action is taken within 1 minute after entering the service mode, the machine will default to normal mode.*
- *Reference Service Parameter Options or Diagnostic Procedures in this section for more information, if the 0704 or 1101 code was selected.*

## Service Parameter Options

The Service Parameter Options will allow you to change the machine's normal operating condition because of customer request, the machine usage, the customer environment, or some specific communication problems.

A Service Options report may be printed while in the service mode to view settings. This report should be printed after making any changes to the settings for verification purposes.

Reference Table 1, Service Parameters Options and Table 2, Service Parameter Defaults.

### Procedure

1. Open the access cover.
2. Press the [Service] key.
3. Enter the access code [0704] and press the [Start] key twice.
4. Enter the option number you desire from the Table 1.

*NOTE: Pressing the [Redial/ ] or the [Pause/ ] key will scroll thru the parameter numbers.*

5. Pressing the \* or the # key will change the setting.
6. Press the [Start] key to enter the selection.
7. Press the [Report] key to print a service options report for setting verification.

*NOTE: Reference Diagnostic procedures for alternative methods of printing the options report.*

**Table 1. Service Parameter Options**

No	Parameter	Options
02	NSF CSI Transmission]- This feature allow you to select either SF/CSI, CSI, or DIS protocol during a transmission.	NSF/SCI CSI DIS only
03	TSI/CIG Transmission	AUTO OFF ON
04	Receive mode equalization (7041 W/O Tag 42)	0.0KM 1.8KM 3.6KM 7.2KM
06	Transmit mode Equalization (7041 W/O Tag 42)	0.0KM 1.8KM 3.6KM 7.2KM
06	Transmit/Receive mode Equalization (7042 & 7041 W/ Tag 42)	0.0KM 1.8KM 3.6KM 7.2KM
09	Transmit initial speed	14400bps 12000bps 9600bps 7200bps 4800bps 2400bps
10	Receive initial speed	14400bps V.17 14400bps V.33 9600bps V.29 4800bps V.27 ter 2400bps V.27 ter
11	Transmit attenuation	0db thru 15db
18	CNG transmit in manual (7041 W/O Tag 42)	OFF ON
19	Error line rate	5% 10%
20	Busy tone detection (7042 & 7041 W/ Tag 42)	OFF ON
21	Dial after - Initial wait time before automatic dialing.	Tone detect 3.0 seconds thru 8.0 seconds
22	Pause after - Pause wait time	Detects dial tone 3.0 seconds thru 12.0 seconds
25	V .29 echo protector tone transmission - Automatically on if programmed in one touch.	OFF ON
26	Short protocol - Automatically off if programmed in one touch.	ON OFF

NOTE: Table does not include unused option numbers.

**Table 1. (continued)**

No	Parameter	Options
27	Redial interval T1 - Wait time between redials	7041 W/O Tag 42: 30, 60, 120, 180 seconds 7042 & 7041 W/ Tag 42: 30, 60, 120, 180, 600, 1200 seconds
28	Redial interval T2 - Wait time between redial groups (3 calls per group).	1 minute thru 15 minutes
29	12 unsuccessful call - Machine monitors if 12 continuous calls were successful.	ON OFF
31	Line monitor - List to tones during communications.	ON OFF
32	Secure access - TCB setting	OFF ON
33	Secure access number (TCB) - Program any four digit number in this range using the keypad.	0000 thru 9999
34	HHM - Half tone high speed mode. (7041 W/O Tag 42)	ON OFF
35	ECM frame length - data octet size per image frame in ECM mode	256 octet 64 octet
36	ECM retrain on PPR - Total number of retransmissions at the same speed.	1 thru 4
37	ECM Receive pages. (7041 W/O Tag 42)	1 page 5 page
38	Substitute reception - Increase the memory capacity of receive to memory by recovering allocated memory space not being used in other areas (ECM, mailbox, store and forward) (7041 W/O Tag 42 only)	ON OFF
39	HM only (7042 & 7041 W/ Tag 42)	OFF ON
40	Same as user parameter #11 in some RX countries. (7042 & 7041 W/ Tag 4 2)	
41	Same as user parameter #15 in some RX countries. (7042 & 7041 W/ Tag 4 2)	
42	Same as user parameter #16 in some RX countries. (7042 & 7041 W/ Tag 4 2)	
43	Same as user parameter #26 in some RX countries. (7042 & 7041 W/ Tag 4 2)	
44	Access digit setting (7042 & 7041 W/ Tag 42)	OFF ON
45	Access digit code (7042 & 7041 W/ Tag 42)	-0, -9, 00, 99
46	Recall function (7042 & 7041 W/ Tag 42)	OFF Earth recall Flash

NOTE: Table does not include unused option numbers.

**Table 2. Service Parameters Defaults**

No. Note	Default setting																			
	USO XCL XLA	AT	AU	BE	CH	DE	DK	ES	FI	GB	GR	IE	IT	MY	NL	NO	NZ	PT	SE	SG
02	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI	NSF/ CSI
03	AUTO	ON	AUTO	AUTO	AUTO	N/A	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO
04	3.6	3.6	3.6	1.8	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
06	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6
09	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400
10	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400	14400
11	10	6	10	6	7	6	10	10	10	10	10	7	9	10	10	10	13	6	6	10
18	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
19	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
20	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
21	TD	TD	3.5	TD	TD	TD	TD	3.5	TD	3.5	3.5	4.0	TD	3.5	TD	TD	TD	TD	TD	3.5
22	4.0	TD	4.0	TD	TD	TD	TD	4.0	4.0	4.0	4.0	TD	TD	4.0	TD	TD	TD	TD	TD	4.0
25	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
26	ON	ON	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
27	120	120	60	120	60	60	60	60	60	180	60	60	120	60	120	60	60	60	120	60
28	10	N/A	1	10	5	1	1	1	1	N/A	1	N/A	10	1	3	6	1	1	10	1
29	OFF	ON	ON	OFF	ON	N/A	ON	ON	ON	OFF	ON	OFF	OFF	ON	OFF	OFF	ON	ON	OFF	ON
31	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
33	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
34	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
35	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256
36	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
37	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

**Table 2. Service Parameters Defaults**

No. Note	Default setting																			
	USO XCL XLA	AT	AU	BE	CH	DE	DK	ES	FI	GB	GR	IE	IT	MY	NL	NO	NZ	PT	SE	SG
38	ON	ON	ON	ON	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
39	ON	ON	ON	ON	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
44	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
45	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
46	Earth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey



## Diagnostic procedures

Individual diagnostics will allow you to perform diagnostic routines throughout the machine in order to isolate a faulty assembly. These tests will also be used in the Chapter 1 and 2, while performing the System Checks and the RAPs.

The thirteen diagnostic available are listed as follows:

- Printer test (00)
- Modem transmit test (01)
- Printer ROM/RAM test (02)
- Control panel key test (03)
- Sensor/interlock test (04)
- Scan motor/ADF test (05)
- LED test (06)
- PIX ROM/RAM test (07)
- Fax ROM/RAM test (10)
- DTMF transmit test (11)
- Print options report (12)
- RAM initialization (13)
- Dialing test (15)
- Image memory test (16)

Each individual diagnostic test is listed with a brief description of each test and the appropriate procedure.

### Printer Test (00)

The printer test will test the machine for proper paper feed from the paper cassette, check routing through the paper path and produce a test pattern to be used to compare image quality in section 3.

#### Procedure

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [00] from the keypad.
6. Enter the quantity of test patterns desired [0 - 9] from the keypad.

*NOTE: There will be a time delay after entering the quantity of test prints in step 6, before the test patterns are actually printed from the machine.*

7. Pressing the [Stop] key will end the test.

### Modem Transmit Test (01)

This test will check the basic signal transmission functions of the modem. The signal transmission is represented by a two digit number. You may choose from the following:

00= 300bps (FSK)  
01=14400bps (V.17 training)  
02=12000bps (V.17 training)  
03= 9600bps (V.17 training)  
04= 7200bps (V.17 training)  
05=14400bps (V.33 training)  
06=12000bps (V.33 training)  
07= 9600bps (V.29 training)  
08= 7200bps (V.29 training)  
09= 4800 bps (V.27 training)  
10= 2400bps (V.27 training)

#### Procedure

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [01] from the keypad.
6. Enter the two digit number for the desired signal to be transmitted (00 - 10) from the keypad.

*NOTE: The signal will be transmitted for 30 minutes or until the [Stop] key is pressed.*



## Printer ROM/RAM Test (02)

The Printer ROM/RAM test will allow you to test the controller ROM/RAM on the main PWB in an attempt to isolate between a hardware or a firmware failure.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [02] from the keypad.
6. Press the [Stop] key to end the test.

*NOTE: When the test is completed, the display will indicate OK or show an error code. The time required to complete the test will depend on machine memory size.*

## Control Panel Key Test (03)

The control panel key test provides a method to functionally test each individual key on the control panel. You can choose between two tests to perform. These tests will help to isolate intermittent problems.

### Procedure

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [03] from the keypad.

**NOTE:** Test options (0, 1) identified in step 6 should be used in the following sequence.

0= Key must be pressed in the sequence shown in Table 1 (Sequence Number column). An error code will appear in the display if the keys are pressed out of sequence or if no key is pressed within 1 minute, press the [Stop] key to end test..

1= Keys pressed will display the characters shown in Table 1. (Character column). Characters may be randomly selected in any sequence.

6. Enter the desired test method [0, 1] from the keypad.
7. Press the [Stop] key to end the test.

**TABLE 1. Control Panel Key Test**

Control Panel Key	Seq. #	Character	Control Panel Key	Seq. #	Character
MANUAL RECEIVE or JOB STATUS	1	A	GROUP KEY 2	24	t
RESOLUTION	2	B	GROUP KEY 3	25	u
HALFTONE	3	C	GROUP KEY 4	26	v
MEMORY SEND or DIRECT SEND	4	D	GROUP KEY 5	27	w
ONE TOUCH 01	5	a	GROUP KEY 6	28	x
ONE TOUCH 02	6	b	TEL/SPEAKER or ALPHA DIAL	29	E
ONE TOUCH 03	7	c	CLEAR or CANCEL	30	F
ONE TOUCH 04	8	d	REDIAL/	31	G
ONE TOUCH 05	9	e	PAUSE/	32	H
ONE TOUCH 06	10	f	KEYPAD 1	33	1
ONE TOUCH 07	11	g	KEYPAD 2	34	2
ONE TOUCH 08	12	h	KEYPAD 3	35	3
ONE TOUCH 09	13	i	KEYPAD 4	36	4
ONE TOUCH 10	14	j	KEYPAD 5	37	5
ONE TOUCH 11	15	k	KEYPAD 6	38	6
ONE TOUCH 12	16	l	KEYPAD 7	39	7
ONE TOUCH 13	17	m	KEYPAD 8	40	8
ONE TOUCH 14	18	n	KEYPAD 9	41	9
ONE TOUCH 15	19	o	KEYPAD *	42	*
ONE TOUCH 16	20	p	KEYPAD 0	44	0
ONE TOUCH 17	21	q	KEYPAD #	46	#
ONE TOUCH 18	22	r	SPEED DIAL	47	! or I
GROUP KEY 1	23	s	START	48	?
			COPY -7042 & 7041 W/ Tag 42)	49	!

## Sensor/Interlock Test (04)

The sensor/interlock test will provide a method to test each sensor and interlock. Reference Figure 1 and Table 1 for name and function of the sensor/interlock .

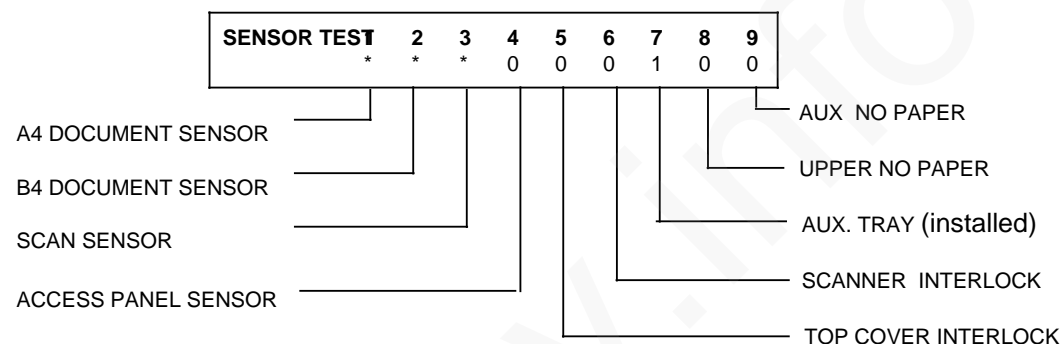
### Procedure

1. Open the access cover and press the [Service] key.
2. Enter [1101] from the keypad.
3. Press the [Start] key.
4. Enter [04] from the keypad.
5. Move the document guides for the widest document possible and load a document against the left guide.
6. Sensors 1, 2, and 3 change status as the document loads.
7. Open and close the access panel on the control panel.
8. Sensor number 4 changes status.
9. Open and close the top cover assembly.
10. Sensor number 5 changes status.
11. Open and close the control panel assembly.
12. Sensor number 6 changes status.

*NOTE: Steps 13 and 14 are not necessary if the auxiliary tray is operating properly.*

13. Disconnect and connect the auxiliary tray harness, if option is present.
14. Sensor number 7 changes status.
15. Remove and reinstall the upper paper cassette.
16. Sensor number 8 changes status.
17. Remove and reinstall the paper in the auxiliary paper cassette.
18. Sensor number 9 changes status.

*NOTE: Pressing the [Stop] key twice will end the test.*



**Figure 1. Sensor Test Display**

**Table 2 Sensor Test Chart**

NO.	Sensor name	Status
1	A4 DOCUMENT SENSOR	* Determined by machine configuration.
2	B4 DOCUMENT SENSOR	* Determined by machine configuration.
3	SCAN SENSOR	* Determined by machine configuration.
4	ACCESS PANEL SENSOR	(0) = Closed (1) = Opened
5	TOP COVER INTERLOCK	(0) = Closed (1) = Opened
6	SCANNER INTERLOCK	(0) = Closed (1) = Opened
7	AUX. TRAY INSTALLED	(1) = Auxiliary tray is installed (0) = Auxiliary tray not installed
8	UPPER NO PAPER	(1) = No paper loaded (0) = Paper loaded
9	AUX. NO PAPER	(1) = No paper or auxiliary tray not installed (0) = Paper loaded

## Scan Motor/ADF Test (05)

The scanner drive test will allow you to perform two different tests. You can check for a defective scan motor and check for paper feed problems.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [05] from the keypad.

**NOTE:** If you select:

*1= The scan motor will operate for five minutes or until the [Stop] key is pressed.*

*2= Load a set number of documents in the document tray, this test will feed the documents into the scanner and the document count will be displayed. After the documents are fed and counted the test will stop.*

6. Enter the desired test method [1, 2] from the keypad.
7. If number 2 test was selected. Press the [Start] key.

**NOTE:** Pressing the [Stop] key twice will end the test.

## LED Test (06)

This test will allow you to test all LEDs on the control panel assembly.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.

**NOTE:** Each LED will light for approximately 1 second in sequence for approximately 3 minutes.

5. Enter [06] from the keypad.

**NOTE:** Pressing the [Stop] key twice will end the test.

## PIX ROM/RAM Test (07)

The PIX ROM/RAM (7042 & 7041 W/ Tag 42) test will allow you to test the machine's PIX ROM/RAM in an attempt to isolate between the hardware and the firmware failure.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [07] from the keypad.

**NOTE:** When the test is completed, the display will indicate OK or show an error code.

## Fax ROM/RAM Test (10)

The Fax ROM/RAM test will allow you to test the machine's ROM/RAM in an attempt to isolate between the hardware and the firmware failure. After the test is completed, the firmware level of the machine will be displayed on the control panel.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [10] from the keypad.

*NOTE: When the test is completed, the display will indicate OK or show an error code.*

## DTMF Transmit Test (11)

The DTMF transmit test allows you to select a tone that you want to test from the keypad. You may choose from the following:

DTMF1	DTMF2	DTMF3	DTMF4
DTMF5	DTMF6	DTMF7	DTMF8
DTMF9	DTMF*	DTMF0	DTMF#

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [11] from the keypad.
6. Press the [Stop] key to end the test.

## Print Options Report (12)

This function will print the user parameter list and the service parameter list.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [12] from the keypad.
6. The report will be print after a short delay.

## RAM Initialization (13)

This function will clear all information stored in system and scanned image RAM (scanned documents). The user and the service parameter options will be reset to the default settings.

### Procedure

---

#### CAUTION

**This procedure will delete all customer entered data (directory, ID, time/date, etc.).**

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [13] from the keypad.
6. Enter [1234] from the keypad.
7. After the RAM initialization is complete the display will read "Load Originals".

## Dialing Test (15)

The dialing test is performed to check that dial tone and pulse tone are properly transmitted. This test must be performed while online to a test center. The following sequence of dialing will occur when performing this test.

- Start=3 seconds line monitoring.
- Tone dialing of the following digits=[1,5,9,#].
- Open line=10 second of line monitoring.
- Pulse dialing of the following digits=[2, 3, 4, 5].
- Open line=10 second of line monitoring.
- Pulse dialing (20pps) of the following digit=[8].
- End of test.

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [15] from the keypad.

*NOTE: The test will end automatically when completed.*

## Image Memory Test (16)

The image memory test will perform a ROM/RAM read/write check and an address bus check.

#### CAUTION

*If documents are in memory, information may be lost when performing this test.*

### Procedure

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [1101] from the keypad.
4. Press the [Start] key.
5. Enter [16] from the keypad.

*NOTE: An error code will be displayed if the test fails.*

## Protocol Monitor

This function displays (I) incoming and (O) outgoing protocol signals that are exchanged between terminals whenever a communication operation is attempted.

### **Procedure**

---

1. Open the access cover.
2. Press the [Service] key.
3. Enter [0618] from the keypad.
4. Press the [Start] key.
5. Press and hold down the [Job Status] key (7042 & 7041 W/ Tag 42 only).

*NOTE: The display returns to normal messages until the send or receive operation begins. The direction of the signals will be indicated by a (I) for incoming and a (O) for outgoing.*

6. After the communication operation is completed, repeat the procedure to exit protocol monitor.
7. Initiate another communication to verify that protocol monitor signals are no longer displayed.

## Setup Tool

The setup tool is a special service tool featuring an LCD display and the test keys (figure 1). You will use this tool to adjust the fuser temperature, adjust the print registration, reset the 100,000 maintenance counter, print the test patterns, and display the total printed pages to the nearest 10,000. This tool will be connected to the setup PWB at CN2 to perform the following functions.

- Fuser temperature (ADJ 5.1).
- Print registration (ADJ 5.2).
- Resetting the 100,000 drum counter (Reference Scheduled Maintenance).
- Test patterns (Reference Diagnostic Procedures).
- Total print count (Reference Diagnostic Procedures).

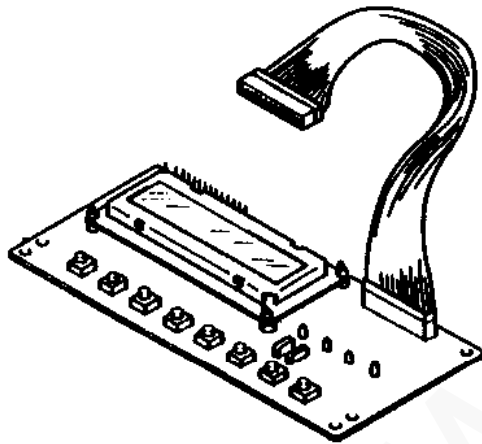


Figure 1. Setup Tool

## Test Patterns

This feature will allow you to select three different test patterns using the setup tool.

### Procedure

1. Switch off the power to the machine.
2. Remove the front/rear covers (REP 1.6).
3. Connect the setup tool at CN2 on the setup PWB.
4. Remove the customer drum counter and install the service drum counter.
5. Switch on the power while pressing the [Reset] key.
6. Press the [Up] key to select the paper size.
  - a. A4: A4
  - b. B5: B5
  - c. LT: Letter
  - d. LG: Legal
7. Press the [Function] key to select a test pattern format.
  - a. BL: Solid
  - b. 2V: 2 vertical dots
  - c. 2H: 2 horizontal dots
8. Press the [Down] key to select the paper tray.
9. Press the [Reset] key to print the test pattern selected.
10. Press the [Reset] to stop printing the selected test pattern.
11. Switch off power and remove the setup tool and the service drum counter.
12. Install the customer drum counter.

## Total Print Count

This feature will allow you monitor total print operations to the nearest 10,000, using the setup tool. This information may be used to inform the customer when their machine is near 100,000 print operations and that scheduled maintenance should be performed.

### Procedure

1. Switch off the power to the machine.
2. Remove the front/rear covers (REP 1.6).
3. Connect the setup tool at CN2 on the setup PWB.
4. Remove the customer drum counter and install the service drum counter.
5. Switch on power while pressing the [Function] and [Down] keys on the setup tool.
6. Setup tool will display the total print count.
7. Switch off power and remove the setup tool and the service drum counter.
8. Install the customer drum counter.



## Product Specifications

### Product Code (7041 W/O Tag 42)

8T7 **USO**  
 9T1 **XCL**  
 8T9 **XLA:** 110V  
 9T0 **XLA:** 220V  
 8T8 **RX1:** DE  
 8V7 **RX2:** AU, DK, FI. GR, NL, NO, PT, ES, SE, IT  
 8V8 **RX3:** BE, CH, GB, IE  
 8V5 **FXAP:** AT, HK, MY, NZ, SG

### Product Code (7042 & 7041 W/ Tag 42)

8HD **USO**  
 9HD **XCL**  
 0HT **XLA:** 110V  
 1HT **XLA:** 220V  
 2HT **BRAZIL:** 220V  
 3HT **BRAZIL:** 110V  
 4HT **RX1:** DE  
 5HT **RX2:** AU, DK, FI. GR, NL, NO, PT, ES, SE, IT  
 6HT **RX3:** BE, CH, GB, IE  
 7HT **FXAP:** AT, HK, MY, NZ, SG

## Electric Power

Voltage	US: 90 VAC to 132VAC , 50/60 Hz (Nominal 120 VAC) RX: 198 to 264, 50/60 Hz
Phase	Single-phase three-wire system
Power consumption	Standby (power saver) approximately 30 Watts
	Standby (average) approximately 70 Watts
	Send approximately 640 Watts
	Receive approximately 640 watts
	Copy approximately 670 watts (full black)
Ground	Standard two pole, three prong, three wire grounded outlet

## Environment

Temperature	64°F - 79°F (18°C - 26°C)
Humidity (Operating)	35% - 50% (without condensation)
Humidity (Non Operating)	20% - 90% (without condensation)
Atmospheric pressure (Altitude)	Maximum above sea level: 7874 ft (2400 m)

## Dimensions

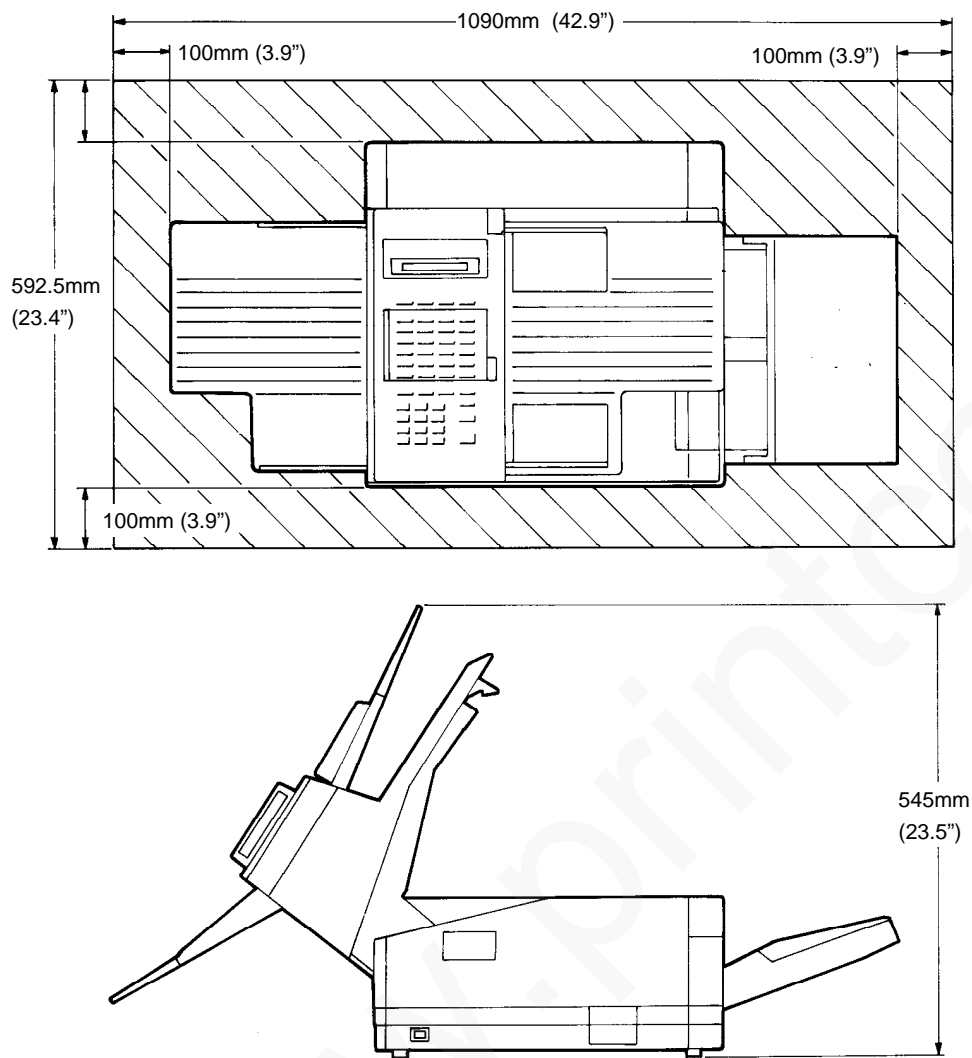
### NOTES:

- Measurements include the handset, trays and extended supports.
- If the auxiliary tray is installed, add 2.5 inches (635mm) to the overall machine height.

Dimensions	Machine
Width	35.5 in (890 mm)
Length / Depth	15.4 in (393 mm)
Height (7041 W/O Tag 42)	11.8 in (300 mm) (Note2)
Height (7042 & 7041 W/ Tag 42)	11.2 in (286 mm) (Note2)
Weight Unpacked (max.)	44.0 pds (18.5 kg)

AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

Minimum Space Required



Note: Add 2.5 inches (635 mm) to the height , if the auxiliary tray is installed.

Figure 1. Space requirements

Documents

Sheet scanner (ADF specification)

Width	148 - 216 mm 5.8 in. - 11.0 in.
Length	100 - 356 mm 4.2 in. - 1m
Thickness	0.060 mm to 0.200 mm
Weight	13 to 32 pound bond
ADF capacity	30 sheets, letter or legal size 13 lb to 20 lb

Paper

Format	Plain paper
Type	20 lb. bond
Size	8.5 inches (216mm)
Output tray capacity	200 sheets

## Scanning Method

7041 W/O Tag 42: The scanning unit has a CCD (charge coupled device) along with an LED array.

7042 & 7041 W/ Tag 42: The scanning unit has a CIS (contact image scanner) which includes a LED array, lens array and sensor array.

## Copy Speed

Std/Fine: 19 seconds per page

## Scanning Line Density

Horizontal

2048 pels/255 mm $\pm$ 1%

1728 pels/208 mm  $\pm$ 1%

Vertical:

G3 (Super Fine) (7042 & 7041 W/ Tag 42)  
15.4 lines/mm ( $\pm$ 1%) (transmission only)

G3 (Fine)  
7.70 lines/mm ( $\pm$ 1%)

G3 (Standard)  
3.85 lines/mm ( $\pm$ 1%)

## Resolution

Group 3: (7041 W/O Tag 42)  
Standard, Fine and Halftone

Group 3: (7042 & 7041 W/ Tag 42)  
Standard, Fine, Superfine and Halftone

Halftone: (7041 W/O Tag 42)  
16-levels

Halftone: (7042 & 7041 W/ Tag 42)  
64-levels

## Printing Method

The printer uses a laser beam to print on plain paper.

## Communication Mode

Compatibility:

CCITT Group 3

Modem/communication speed:

14400 BPS with automatic change to 12000,  
9600, 7200, 4800, 2400 bps per CCITT V.33/17  
V.29, V.27ter and V.21.

## Memory Capacity

(7041 W/O Tag 42):

512K Byte base M/C - 36 pages (CCITT #1  
test pattern)

1 Meg. option - 108 pages (CCITT #1  
test pattern)

2 Meg. option - 170 pages (CCITT #1  
test pattern)

(7042 & 7041 W/ Tag 42):

1 Meg. base M/C - 65 pages (CCITT #1  
test pattern)

1.5 Meg. option - 180 pages (CCITT #1  
test pattern)

## Acoustic Noise

Conditions	Levels
Unweighted sound pressure level.	50dbspl for 63 to 8000 Hz center frequency of octave bandwidth.
A weighted sound pressure level.	55.33 dba maximum during copy mode with 2nd bin attached.

## Telephone Requirements

The 7041/7042 comes equipped with its own telephone; a separate telephone is not necessary for operation of the machine. The telephone wall jack should be within 5 feet (1.5 meters) of the machine. It should be a 6 position, 4 pin modular jack (USOC RJ11C). A single line (no key set or multiple locations on the same extension number) is recommended. The wall jack can be part of a PABX (Private Automatic Branch Exchange) system or CO (Central Office) telephone lines, but it must be RJ11 compatible.

### US: FCC regulations

#### Part 68: Data coupler notice

This machine contains an internal data coupler and a hearing aid compatible handset. Its use is restricted by the FCC (Federal Communications Commission). To comply with the FCC rules, you must carefully read and follow the instructions listed below:

1. If requested, you must give the telephone company the following information:

- The telephone number connected to this machine.
- The FCC registration number for this machine.

The registration number is issued by the FCC, under part 68 of its Rules and Regulations, for direct connection to a telephone line. The number is printed on a label on the rear of the machine.

- The REN (Ringer Equivalence Number) of the machine is printed on a label at the rear of the machine. The REN for the machine is printed on a label at the rear of the machine.

*NOTE: The REN is used to determine the sum total of the devices you may connect to one telephone line and still have all of them ring when your telephone number is called. In many areas, the sum total of the REN of all devices connected to one line should not exceed five (5.0). To be certain, you should call your local telephone company to determine their maximum allowed REN for your calling area.*

### WARNING

**Ask your local telephone company for the modular jack type installed on your line. Connecting this machine to an unauthorized jack can severely damage telephone company equipment. You, not Xerox, assume all responsibility and/or liability for any damage caused by the connection of this machine to an unauthorized jack.**

2. You may safely connect this machine to the following standard modular jack: USOC RJ11C. Use the standard line cord (with modular plugs) provided with the installation kit to connect it.

Do **not** connect this machine to a party or coin operated phone line.

3. Repairs to the machine should only be made by Xerox or an authorized Xerox service agency. This applies at any time during or after the service warranty period. If unauthorized repair is performed, the remainder of the warranty period is null and void.

4. If you find the telephone line is damaged or the telephone company notifies you that your machine is causing damage, disconnect the machine from the telephone line and call for service. Do **not** reconnect the machine until necessary repairs are made.

5. The telephone company will, where practical, notify you when they need to temporarily disconnect service. However, if action is reasonable and necessary, but prior notice is not practical, they may still temporarily disconnect your service. In such cases they must:

- Immediately notify you of their temporary action.
- Reconnect service when the source of damage is removed.
- Inform you of your rights to bring a complaint to the FCC under FCC rules.

6. The telephone company may make changes to its communications facilities, equipment, operations, or procedures. Such action must be reasonable, required in the operation of their business, and consistent with FCC rules. They must give you prior written notification if the changes can:

- Make your machine incompatible with their equipment,
- Require modification or alteration of the machine,
- Otherwise physically affect performance of the machine.

## WARNING

**This machine generates radio frequency energy.** It complies with Class A computing device limits defined in Subpart J of Part 15 of FCC Rules.

Class A limits provide reasonable protection in a residential environment against interference with radio communications. Reasonable protection is not a guarantee against radio or television interference. Operation of this equipment in a residential area or with other peripherals not licensed as Class A can also cause interference (determined by turning the machine on and off). If this machine is not installed or used as instructed in this manual, it may cause interference.

You should try to correct the interference by changing the position of the machine, the other device, the receiving antenna, or the power cords. If that does not work, try connecting the machine to another wall outlet on a different line circuit. An experienced radio television technician may be able to provide additional suggestions. If this does not correct the interference, you will be required at your own expense to correct the interference. An FCC booklet, "HOW TO IDENTIFY AND RESOLVE RADIO-TV INTERFERENCE PROBLEMS" (stock number 004-000-00345-4) is available from the U.S. Government Printing Office, Washington, D.C., 20402.

## XCI: Canadian DOC notices

### Canadian radio noise emissions statement

**NOTICE:** The Canadian Department of Communications label identifies certified equipment. The certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the satisfaction of the user.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situation.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**Caution:** Users should not attempt to make such connection themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each machine device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination of a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all devices does not exceed 100. The Load Number for the machine is printed on a label on the rear of the machine.

### XCL: Class A notice

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

## Special Tools and Consumables

The following tools and consumables are required to service the 7041/7042.

### Tools

<u>Part No.</u>	<u>Description</u>
600K37381	Mylar scraper, charger cleaner, and cotton swab
600T01970	Setup tool
099P03079	Temperature tape
600T90855	Temperature tape (RX)
600T91089	Interlock cheater
095P00501	Black bag
600T91808	Service drum counter
600T91810	Ten way connector
082P00151	Test pattern (XTP327.000)

### Consumables

<u>Part No.</u>	<u>Description</u>
035P01737	Drop cloth
035P02162	Cotton swabs
043H00012	Lens and Mirror Cleaner
043P00067	Clean-ups
070E00110	Conductive grease
070P00027	Silicone grease
070P00095	Turbine oil
600T90393	Oil (tellus 68) (RX)
035P02163	Lint free tissues (500 per pack)

### Kits

<u>Part No.</u>	<u>Description</u>
097K14750	Repack (USO/XCL)
600K34560	220V scheduled maintenance (RX, XLA)
600K34550	110V scheduled maintenance (USO, XLA,XCL)

## Customer Consumables

<u>Part No.</u>	<u>Description</u>
006R00287	Toner - 2 cartridge pack (supply item only; includes fuser cleaning pad) (USO, XCL, XLA)
006R00713	Toner - 2 cartridge pack (RX)

## Tag/MOD Information

The manual is revised to include the latest machine changes listed in Table 1.

### Tag/MOD Matrix

The Tag/MOD matrix is located on the right side of the scanner module. All important modifications to the machine that are installed in the factory or in the field, are identified by a number marked on this matrix. The appropriate Tag/MOD number should be marked off or removed from the matrix whenever a Tag/MOD is installed.

Determine the Tag/MOD level of the machine by the Tag/MOD matrix on the machine.

If the matrix is illegible, refer to the factory and field install serial numbers to determine which Tag/MOD(s) were installed at the factory and which are designated for installation in the field. If the serial number is designated as Field Install. Read the description to determine how to identify the Tag/MOD.

## Tag/MOD Index

Read the description to determine how the machine will benefit from the Tag/MOD. Refer to the classification for each Tag/MOD and the explanation of each classification for information as to when to use the Tag/MOD. Refer to the bulletin number for additional Tag/MOD information.

Refer to the kit number to order the modification kit.

### Tag/MOD Classification

Classification of Tag/MOD (s) are identified below by a letter (M, R, O, or N). The list below defines the degree of importance assigned to each letter:

- M** Mandatory
- R** Install at time of repair
- O** Optional
- N** Not for field retrofit. Factory retrofit only



Table 1. Tag/MOD Index

Tag/MOD and Classification	Description	Kit and Bulletin Numbers	Factory Install (Listed Serial Number and above)
01	A setup PWB (Tag 1), P/N 140K51541 is being cut-in to the 7041 to prevent false LB14 errors. The voltage detection level and timing cycle in the new PWB's firmware has been changed to be less sensitive to normal operating conditions.	700P97022	
42 (RX only)	Tag 42 is assigned to new RX 7041's with new components and features; The new components are a main PWB, control panel, power supply, interconnect PWB, scanner module with a CIS (contact image scanner), high torque scan motor, and a top cover. A 7041 with Tag 42 is equivalent to the 7042 (USO/XCL/XLA) machine. 7041 machines with Tag 42 also include these new features; fast scan, 1 meg base memory, 64 levels of halftone, super fine transmission and dual access operation.		



# General Information

## Lubrication Procedure

### Purpose

The 7041/7042 will require lubrication periodically to prevent problems such as binding, squeaks, and wear of components. The five areas that will need lubrication are the developer assembly, chassis springs, rubber pinch roller ground plate, paper feed roller clutch and the rear frame.

### Procedures

#### Developer assembly

1. Switch off the power and disconnect the power cord.

#### **CAUTION**

*Exposing the drum surface directly to light will decrease drum sensitivity.*

2. Remove the developer assembly and place the assembly into a black bag.
3. Remove the front/rear covers (REP 1.6).
4. Remove the developer assembly drive cover.
5. Lubricate the the developer drive pulleys with silicone grease, P/N 070P00027 (figure 1).
6. Lubricate the gears with oil, P/N 070P00095 (USO) or P/N 600T90393 (RX) (figure 1).

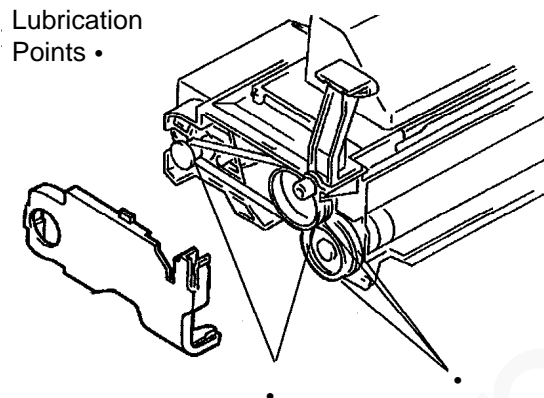


Figure 1. Developer assembly

#### Chassis springs

7. Lubricate the chassis springs with conductive grease, P/N 070E00110 (Figure 2).

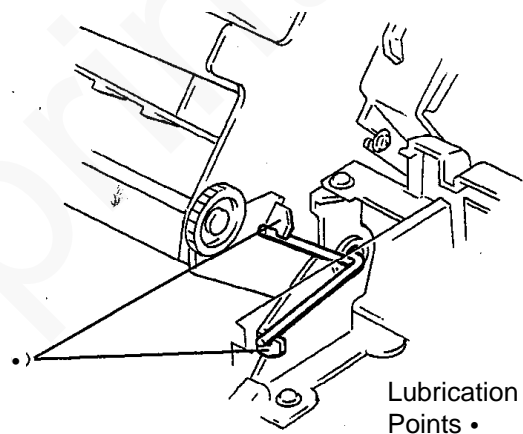


Figure 2. Chassis springs

#### Rubber Pinch Roller Ground Plate

8. Lubricate the ground plate with conductive grease, P/N 070E00110 (fig. 3).

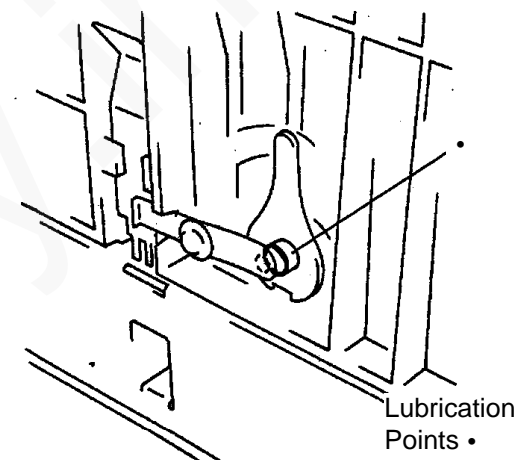


Figure 3. Ground plate

#### Paper feed roller clutch

*NOTE: If the auxiliary tray is install, the auxiliary paper feed clutch must be lubricated, reference auxiliary tray kit in this section.*

9. Lubricate the paper feed roller clutch with oil, P/N 070P00095 (USO) or P/N 600T90393 (RX) (figure 4).
  - a. Apply one or two drops of oil on a cotton swab.
  - b. Apply to the oil clutch spring using the cotton swab.

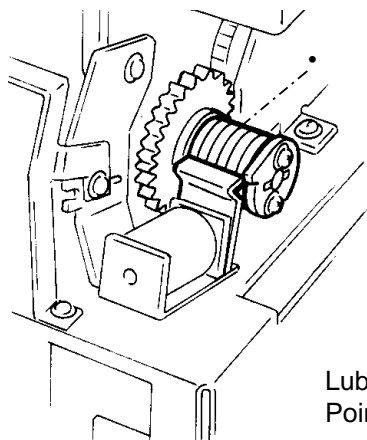


Figure 4. Paper feed clutch

#### Rear frame

10. Lubricate the drive gears with silicone grease, P/N 70P00027 (figure 4).

Lubrication  
Points •

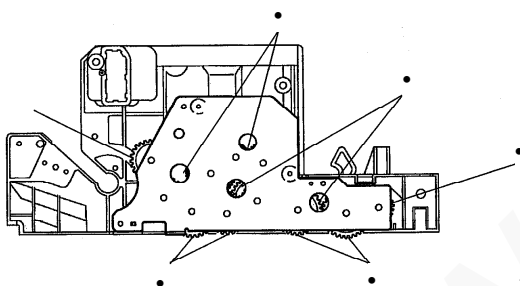


Figure 5. Rear frame

## Scheduled Maintenance Kit

### Purpose

Scheduled maintenance should be performed after every 100,000 print operations to extend the reliability of the machine and maintain print quality.

Refer to Special Tools and Consumables for kit numbers.

### Procedure

1. Replace the following parts.
  - a. Fuser assembly (REP 3.15).
  - b. Friction pad (REP 3.11).
  - c. Corotron assembly (REP 3.10).
  - d. Developer assembly (PL 3.2).
  - e. Initial toner (PL 3.3).
  - f. Ozone filters A/B (PL 3.2)
  - g. Fuser cleaning pad (PL 3.2)
  - h. Paper path belt (PL 3.3)
  - i. Paper feed roller (REP 3.8)
  - j. Rubber pinch roller (REP 3.9)
  - k. Lower exit roller (REP 4.1)
  - l. Upper exit roller (REP 4.2)
2. Clean the following items.
  - a. Drum module (charge corotron and drum ends)
  - b. Retard pad (PL 2.2)
  - c. Feeder roller assembly (PL 2.3)
  - d. ADF roller assembly (PL 2.3)
  - e. Exit roller assembly (PL 2.3)
3. Lubricate the following areas (Reference Lubrication Procedures in this section).
  - a. Developer assembly
  - b. Chassis springs
  - c. Rubber pinch roller ground plate
  - d. Paper feed roller
  - e. Rear frame

4. Perform the feed solenoid adjustment (ADJ 3.4).
5. Perform the fuser temperature adjustment (ADJ 5.1).
6. Check the print registration (ADJ 5.2).
7. Reset the 100,000 count.
  - a. Switch off the power.
  - b. Open the top cover and remove the drum counter.
  - c. Install the service drum counter.
  - d. Remove the upper right cover (REP 1.3).
  - e. Connect the setup tool connector to the setup PWB connector (CN2).
  - f. Switch on the power, while pressing the [FF] key. The setup tool will display the following message.

CLEAR

- g. Press the [Function] key to clear the counter.
8. Perform the system checks (Reference System Checks, section 1).

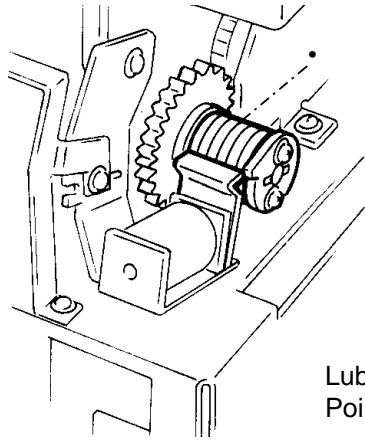


Figure 4. Paper feed clutch

#### Rear frame

10. Lubricate the drive gears with silicone grease, P/N 70P00027 (figure 4).

Lubrication  
Points •

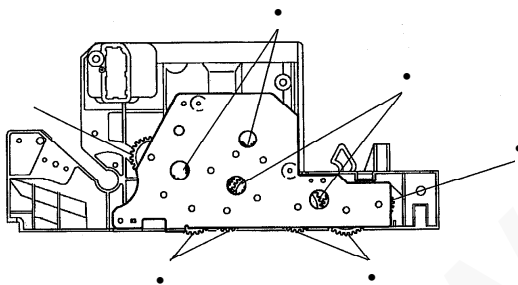


Figure 5. Rear frame

## Scheduled Maintenance Kit

### Purpose

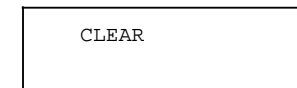
Scheduled maintenance should be performed after every 100,000 print operations to extend the reliability of the machine and maintain print quality.

Refer to Special Tools and Consumables for kit numbers.

### Procedure

1. Replace the following parts.
  - a. Fuser assembly (REP 3.15).
  - b. Friction pad (REP 3.11).
  - c. Corotron assembly (REP 3.10).
  - d. Developer assembly (PL 3.2).
  - e. Initial toner (PL 3.3).
  - f. Ozone filters A/B (PL 3.2)
  - g. Fuser cleaning pad (PL 3.2)
  - h. Paper path belt (PL 3.3)
  - i. Paper feed roller (REP 3.8)
  - j. Rubber pinch roller (REP 3.9)
  - k. Lower exit roller (REP 4.1)
  - l. Upper exit roller (REP 4.2)
2. Clean the following items.
  - a. Drum module (charge corotron and drum ends)
  - b. Retard pad (PL 2.2)
  - c. Feeder roller assembly (PL 2.3)
  - d. ADF roller assembly (PL 2.3)
  - e. Exit roller assembly (PL 2.3)
3. Lubricate the following areas (Reference Lubrication Procedures in this section).
  - a. Developer assembly
  - b. Chassis springs
  - c. Rubber pinch roller ground plate
  - d. Paper feed roller
  - e. Rear frame

4. Perform the feed solenoid adjustment (ADJ 3.4).
5. Perform the fuser temperature adjustment (ADJ 5.1).
6. Check the print registration (ADJ 5.2).
7. Reset the 100,000 count.
  - a. Switch off the power.
  - b. Open the top cover and remove the drum counter.
  - c. Install the service drum counter.
  - d. Remove the upper right cover (REP 1.3).
  - e. Connect the setup tool connector to the setup PWB connector (CN2).
  - f. Switch on the power, while pressing the [FF] key. The setup tool will display the following message.



- g. Press the [Function] key to clear the counter.
8. Perform the system checks (Reference System Checks, section 1).

## Signal Name Mnemonics

Signal Name	Signal Description
+12	Positive 12 volts
+18	Positive 18 volts
+22	Positive 22 volts
+24	Positive 24 volts
+5	Positive 5 volts
+9	Positive 9 volts
-12	Negative 12 volts
A0	Address bus
A1	Address bus
A10	Address bus
A11	Address bus
A12	Address bus
A13	Address bus
A14	Address bus
A15	Address bus
A16	Address bus
A2	Address bus
A3	Address bus
A4	Address bus
A5	Address bus
A6	Address bus
A7	Address bus

Signal Name	Signal Description
A8	Address bus
A9	Address bus
AC	Alternating current
AGND	Analog ground
AINBIAS	Analog in bias
AINCCH	Analog in charge
AINFN	Analog in fan
AINPCH	Analog in transfer
AINTH	Analog in thermistor
ANLGLM	Analog in laser power
ANLGPE	Analog paper end
ANLGTE	Analog toner empty
BA0	Address bus
BA1	Address bus
BD0R	Data bus
BD1R	Data bus
BD2R	Data bus
BD3R	Data bus
BD4R	Data bus
BD5R	Data bus
BD6R	Data bus
BD7R	Data bus

Signal Name	Signal Description
BIDRV	Bias driver
BIVR1	Density control 1
BIVR2	Density control 2
BLA17	Segment RAM address 17
BLA18	Segment RAM address 18
BOOKSW	Access panel signal
CCDRV	Charger, discharger driver
CFON0	Feed solenoid control
CFON1	Feed solenoid control
CIS	Ringer detection
CMD	Command signal (driver)
CML	FAX/TEL selection signal
COVER	Scanner interlock
CRDY0	Command ready (main)
CS	CCD compensating
D0	Data bus
D1	Data bus
D2	Data bus
D3	Data bus
D4	Data bus
D5	Data bus
D6	Data bus

Signal Name	Signal Description
D7	Data bus
DCLED	Discharge LED control
DHOOK0	Handset hook signal
DIAL	Line selection dial signal
DIALT0	Dial tone detection
DOCA4	A4 document sensor
DOCB4	B4 document sensor
DOCSTB	Document standby sensor
DRCS	Drum counter chip select
DRD0	Drum counter data
DRD1	Drum counter data
DRSCK	Drum counter clock
FDA1	Feed motor phase A
FDB1	Feed motor phase B
FDCR0	Feed motor control
FDCR1	Feed motor control
FDON	Fan motor control
FS1	Paper feed sensor
FS1D	Paper feed sensor
FS2	Output paper sensor
HEON0	Heater on signal
HOOKE	Handset off hook

Signal Name	Signal Description
IOR	I/O read
IOW	I/O write
KEYCS	Keyboard chip select
L1	Line 1
L2	Line 2
LCDER	LCD enable
LD	Dial pulse generation
LD0	Laser beam drive signal
LED24V	24 volts for LED
LOOP0	Line current detection
LSPWRC	Laser beam power control
MG+	Developer motor power
MIC-	Handset microphone -
MOE0	Memory output enable
OA	Scan motor phase A
OA0	Scan motor phase A low
OB	Scan motor phase B
OB0	Scan motor phase B low
OPHS	Handset line selection
PAHI1	CCD clock 1
PAHI2	CCD clock 2
PCDRV	Transfer charger driver

Signal Name	Signal Description
PD	Peripheral data
PGND	Power ground
PHA	Feed motor phase A
PHB	Feed motor phase B
PHC	Feed motor phase C
PHD	Feed motor phase D
POD0	Polygon motor drive
POSYN0	Polygon sync signal
POWER	+5v at the driver
PSCK0	Peripheral serial clock
RAMST0	RAM capacity status 0
RAMST1	RAM capacity status 1
RB	CCD reset pulse
READY0	System ready of driver
RES24	Positive 24 volts and reset
RXA	Analog receive signal
SGND	Signal ground
SP	Speaker output signal
SP+	Handset speaker +
SP-	Handset speaker -
SPPLY5	Toner empty sensor power
STS	Status signal of main

Signal Name	Signal Description
TCS00	RAM chip select 0
TCS10	RAM chip select 1
TCS20	RAM chip select 2
TCS30	RAM chip select 3
TCS40	RAM chip select 4
Tel1	Telephone line 1
Tel2	Telephone line 2
TR	CCD shift pulse
TXA	Analog send signal
UFE0	User field enable
VCK0	1-pixel video clock
VDA0	1-pixel video data
VOUT	Video output
VSU0	Video synchronization
WR0	Memory write

## Install

### Preparation

- Plan the location for telephones lines and power cords so they are out of the way.
- Ensure that all space requirements are met.
- Since the equipment is air cooled, ensure that the ventilation holes on the back and top of the machine are not blocked.
- Avoid locations near air conditioners, heaters, areas with rapid temperature fluctuations, ammonia vapors, poor ventilation, the direct sunlight, dust, vibration, chemicals, flammable materials, volatile materials, and excessive humidity.
- The following installation and removal procedure is for service reference only. Additional details can be found in the User Handbook.

1. Open the shipping carton and unpack the machine. Check for scratches or other damage. Check the delivered items against the following list:

- Machine
- Document exit tray
- Document tray
- Handset cradle
- Handset
- Telephone line cable
- Power cord
- Drum module
- Developer assembly
- Drum counter
- Mylar scraper
- Fuser cleaning pad
- Paper cassette
- User documentation
- Cotton swab
- Warning label **(RX )**
- Customer assistance label **(USO )**
- Scorotron cleaning tool
- Document tray extension

Signal Name	Signal Description
TCS00	RAM chip select 0
TCS10	RAM chip select 1
TCS20	RAM chip select 2
TCS30	RAM chip select 3
TCS40	RAM chip select 4
Tel1	Telephone line 1
Tel2	Telephone line 2
TR	CCD shift pulse
TXA	Analog send signal
UFE0	User field enable
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VDA0	1-pixel video data
VOUT	Video output
VSU0	Video synchronization
WR0	Memory write

## Install

### Preparation

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- Mylar scraper
- Fuser cleaning pad
- Paper cassette
- User documentation
- Cotton swab
- Warning label **(RX )**
- Customer assistance label **(USO )**
- Scorotron cleaning tool
- Document tray extension



## Machine Assembly

### Initial installation

To unpack the machine, you must remove the accessories and the machine, then remove the packaging from the inside the machine. Use the following procedures to unpack the machine and the accessories.

1. Open the top of the carton and lift the component tray out of the box.
2. Remove the machine from the carton. Remove the plastic and the tape from the machine.
3. Remove the cardboard strip from the feet of the machine.
4. Make sure all the components are with the tray.
5. Push the release latch to open the top cover.
6. Remove the packing material and the tape from inside the machine.
7. Remove the tape from the paper cassette.
8. Place the machine in the desired location.

### Installing the fuser cleaning pad

9. Grasp the clips in the center of the fuser cleaning pad.
10. Install the fuser cleaning pad in the fuser roller slot.

### Installing the developer assembly and the drum module

11. Hold the developer unit with two hands and shake the cartridge horizontally several times.
12. Place the developer assembly on a flat clean surface.
13. Holding the developer assembly with one hand, grasp the edge of the protective strip under the toner housing. Pull the strip firmly to completely remove it from the cartridge.

#### CAUTION

**Do not touch the drum surface or the magnetic roller on the drum unit. Do not leave the drum unit outside the machine for an extended period. Take care not to damage the charger wire. Touching the drum or the magnetic roller or exposing the drum unit to light could lower the print quality.**

14. Hook the drum module to the developer assembly.
15. Insert the drum counter in the front right corner of the machine. Install the drum counter until the red line displays.
16. Align the three shafts on the sides of the developer assembly/drum module with the slots in the machine frame. Install the developer assembly/drum module.
17. Press firmly on the green squares until the drum module clicks into place.

### Installing the trays

18. Install the document tray extension on the top cover.
19. Slide the tabs of the document exit tray into the slots located on the left side of the scanner module.
20. Slide the tabs of the document tray into the slots located on the right side of the scanner module.

### Installing the paper cassette

21. Align the tabs on each side of the paper cassette with the slots located on the right side of the machine.
22. Insert the paper cassette in the opening in the machine.

### Installing the handset cord and cables

*NOTE: On RX machines the telephone jack is located on the left, when viewing the connector jacks.*

23. Insert one end of the telephone cable into the modular jack on the left side of the machine.
24. Insert the opposite end of the telephone cable into the telephone wall jack.
25. Insert one end of the handset cable into the modular jack on the bottom of the cradle.
26. Insert the opposite end of the handset cable into the modular jack on the left side of the machine.
27. Insert one end of the curly cord into the handset.
28. Insert the opposite end of the curly cord into the modular jack on the bottom of the cradle.



### Installing the handset cradle

29. Release the stud pins from the mounting studs.
30. Align the mounting studs on the cradle to the holes located on the back of the rear cover.
31. Insert the studs into the holes.

### Installing the power cord

*NOTE: Do not install the machine on the same electrical circuit as an air conditioner, the copy machine or other high consumption electrical appliance. These appliances can cause electrical "draw downs" when they operate temporarily reducing the power available for other equipment on the circuit and could damage your fax.*

32. Check the voltage as given in the specifications.
33. Check that the power switch of the machine is set to the OFF position.
34. Plug the power cord into the AC power outlet on the left side of the machine.
35. Plug the opposite end of the power cord into the wall outlet.

### **RX Panel Overlay Installation**

1. Locate the new language panel overlay. This overlay will replace the English panel overlay installed on the facsimile machine.
2. Remove the backing from each overlay. Place each overlay into the appropriate location and press the overlay against the control panel until the overlay fits flush.
3. Refer to the manuals for machine installation, language selection, and other operating instructions.

### **RX LCU PWB Configuration**

The application of the LCU is dependent on the switch settings and the configuration of the connectors CN3, 4 and 5 on the LCU PWB. The connectors and switches control how the machine will respond to the customer's telephone equipment.

1. Table 1 shows the shorting pin location number, country name, and the setting.
2. Table 2 shows the dip switch name, country name, and the settings.
3. Refer to section 7 Wiring Data for the pin to pin configuration of LCU connectors CN3, 4 and 5.

### Installing the handset cradle

29. Release the stud pins from the mounting studs.
30. Align the mounting studs on the cradle to the holes located on the back of the rear cover.
31. Insert the studs into the holes.

### Installing the power cord

*NOTE: Do not install the machine on the same electrical circuit as an air conditioner, the copy machine or other high consumption electrical appliance. These appliances can cause electrical "draw downs" when they operate temporarily reducing the power available for other equipment on the circuit and could damage your fax.*

32. Check the voltage as given in the specifications.
33. Check that the power switch of the machine is set to the OFF position.
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2. Table 2 shows the dip switch name, country name, and the settings.
3. Refer to section 7 Wiring Data for the pin to pin configuration of LCU connectors CN3, 4 and 5.

**Table 1. RX LCU Shorting Pin Connections**

Pin Number	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
	Country																																						
GB	X		X		X			X									X	X										X				X			X	X			X
IE	X		X		X			X	X	X				X			X	X					X	X	X			X	X	X		X				X			X
CH	X		X		X			X		X				X		X	X				X			X	X						X	X	X				X		X
BE	X		X		X			X	X	X			X	X			X	X		X					X			X	X	X		X	X			X			X
AU	X		X		X				X	X		X		X			X	X		X					X			X	X	X		X	X			X			X
NZ	X		X		X			X		X							X	X										X				X			X			X	X
HK	X		X		X			X			X						X	X		X								X	X	X		X	X	X	X	X			X
SG	X		X		X			X			X						X	X					X		X			X	X	X		X	X	X		X			X
MY	X		X		X			X			X						X	X		X					X			X	X	X		X	X	X		X			X
SE	X		X		X			X	X	X	X						X	X					X		X			X	X	X		X				X			X
DK	X		X		X			X	X						X		X	X					X		X			X			X	X	X	X		X			X
FI	X		X		X			X	X	X	X						X	X					X	X				X			X	X	X	X		X			X
NO		X	X			X		X		X				X			X	X					X	X				X	X	X		X				X			X
AT		X	X			X		X	X	X				X			X	X				X		X				X	X	X			X				X		X
GR	X		X		X			X	X	X	X						X	X					X	X				X	X	X		X				X			X
ES	X			X	X			X	X	X				X			X	X					X	X				X	X	X		X				X			X
PT	X		X		X			X	X					X			X	X					X		X			X	X	X		X				X			X
IT	X			X	X			X	X	X				X			X	X					X		X			X			X	X	X	X		X			X
NL	X		X		X			X	X	X		X					X	X	X						X			X	X	X		X	X			X			X
TU	X		X		X			X			X						X	X					X	X				X	X	X		X				X			X

NOTE: X indicates that a shorting pin is required for that pin number.

Note: AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

Table 2. RX LCU Dip Switch Settings

Country	DIP SW1 (BITS)										DIP SW2 (BITS)										DIP SW3 (BITS)									
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
GB		X						X					X						X		X				X	X				
IE											X		X				X				X				X	X				
CH											X		X				X				X				X	X				
BE											X		X				X				X				X	X				
AU			X				X				X		X						X		X				X	X				
NZ			X				X					X							X		X				X	X				
HK		X						X				X							X		X				X	X				
SG											X		X				X				X				X	X				
MY		X									X		X								X				X	X				
SE											X		X				X				X				X	X				
DK											X		X				X				X				X	X				
FI											X		X				X				X				X	X				
NO			X		X						X		X						X		X				X	X				
AT											X		X				X				X				X	X				
GR											X		X				X				X				X	X				
ES											X		X				X				X				X	X				
PT											X		X				X				X				X	X				
IT											X		X				X				X				X	X				
NL											X		X				X				X				X	X		X		
TU											X		X				X				X				X	X				

NOTE: X indicates the ON position.

Note: AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom, IE=Ireland, MY=Malaysia, TU=Turkey

## Auxiliary Tray Kit

### Procedure

#### Kit preparation and content verification

1. Open the kit carton and remove the auxiliary tray.
2. Remove the paper cassette from the auxiliary tray.
3. Remove the packing materials from the tray and the paper cassette.
4. Check that the following items are present.
  - a. Auxiliary tray
  - b. Paper cassette
  - c. Screws (4 each)

#### Machine preparation

5. Switch off the power and disconnect the power cord from the machine.

#### **CAUTION**

*Exposing the drum surface directly to light will decrease drum sensitivity.*

6. Open the top cover and remove the following items from the machine.
  - a. Developer assembly (place the assembly into a black bag)
  - b. Fuser cleaning pad
  - c. Drum counter
  - d. Paper cassette
7. Place the machine on a drop cloth.
8. Stand the machine up on the left side.

#### Installation

9. Connect the drive motor connector on the auxiliary tray to connector (CN3) located on the machine's bottom pan.

*NOTE: Be sure to position the excess wire harness back into the auxiliary tray drive motor area to avoid pinching the wires.*

10. Align the two guide pins on the auxiliary tray to the holes on the bottom pan.
11. Install the four screws to retain the auxiliary tray to the bottom pan.
12. Place the machine back in the normal operating position.
13. Load paper into the auxiliary paper cassette.
14. Install the following items.
  - a. Drum module/developer assembly
  - b. fuser cleaning pad
  - c. Drum counter

*NOTE: Do not install the other paper cassette at this step.*

15. Perform a copy operation to verify proper operation of the auxiliary tray.
16. Install the other paper cassette.
17. Perform the system checks in section 1.

## Memory Option Kits

### **1 Meg Kit (7041 W/O Tag 42) (USO, XCL, XLA, RX)**

For all countries, this memory kit contains a PWB with 1 Meg of memory.

### **Upgrade to 2 Meg Kit (7041 W/O Tag 42) (USO, XCL, XLA)**

In USO/XCL/XLA, an upgrade memory kit contains two memory chips. The chips are installed on the 1 Meg memory PWB to provide 2 Meg of memory.

### **2 Meg Kit (7041 W/O Tag 42) (RX)**

In RX, this memory kit contains a PWB with 2 Meg of memory.

### **1.5 Meg Kit (7042 & 7041 W/ Tag 42) (USO, XCL, XLA, RX)**

For all countries, this memory kit contains a PWB with 1.5 Meg of memory.

### Procedure

#### Memory option installation (1 meg, 1.5 meg or 2 meg)

1. Switch off the power and disconnect the power cord from the left side of the machine.
2. Remove the two screws retaining the PWB chassis to the main chassis.
3. Slide the PWB chassis out of the machine until the following connector is visible.
  - 7041 W/O Tag 42: CN2
  - 7042 & 7041 W/ Tag 42: CN3
4. Disconnect connector and remove the PWB chassis.

5. (7041 W/O Tag 42 only) Verify that the switch (SW) on the memory PWB is set as follows.

1 meg = bit 1 is set to ON and bit 2 is set to OFF.

2 meg = bit 1 is set to OFF and bit 2 is set to ON.

6. Connect the memory PWB to the following connector on the main PWB.
- 7041 W/O Tag 42: CN5
  - 7042 & 7041 W/ Tag 42: CN4
7. Align the standoffs on the memory PWB with the holes on the PWB chassis.
8. Press the standoffs into the holes.
9. Reinstall in the PWB chassis.
- a. Slide the PWB chassis into the machine until you can connect the following connector.
- 7041 W/O Tag 42: CN2
  - 7042 & 7041 W/ Tag 42: CN3
- b. Install the two screws retaining the PWB chassis to the machine.
10. Perform the system checks in section 1.

#### Memory chip option installation (USO,XCL,XLA) (7041 W/O Tag 42)

1. Switch off the power and disconnect the power cord from the left side of the machine.
2. Remove the two screws retaining the PWB chassis to the main chassis.
3. Slide the PWB chassis out of the machine until CN2 is visible.
4. Disconnect connector CN2 and remove the PWB chassis.
5. Remove the 1 Meg option PWB.

6. Remove the EPROM retainers on the memory PWB.
- a. Slide the retainer towards the eprom align mark.
- b. Lift off the retainer.
7. Install the EPROMS and reinstall the retainers.
8. Set the switch (SW) on the memory PWB as follows:
- 2 meg = bit 1 is set to OFF and bit 2 is set to ON.
9. Connect the memory PWB to the connector CN5 on the main PWB.
10. Align the standoffs on the memory PWB with the holes on the PWB chassis.
11. Press the standoffs into the holes.
12. Reinstall in the PWB chassis.
- a. Slide the PWB chassis into the machine until you can connect connector CN2.
- b. Connect the connector CN2.
- c. Install the two screws retaining the PWB chassis to the machine.
13. Perform the system checks in section 1.

## Removal Repack Kit

Repack kit, P/N 97K14750 should be ordered prior to machine removal.

### Procedure

1. Perform RAM initialization.
  - a. Press the [Service] key.
  - b. Enter [1101] from the keypad.
  - c. Press the [Start] key.
  - d. Enter [13] from the keypad.
  - e. Enter [1234] from the keypad.
2. Remove the following parts and place in bags. Apply tape where required.
  - Paper cassette.
  - Handset and cradle
  - Developer assembly and drum module.
  - Power cord
  - Fuser pad
  - Document tray
3. Disconnect the telephone line. Set the line as it was before installation.
4. Pack the machine.
  - a. Tape down the control panel.
  - b. Tape down the top cover.
  - c. Place the protective bag over the machine.
  - d. Place machine into the box.
5. Clean the surrounding area and complete any service reports.

5. (7041 W/O Tag 42 only) Verify that the switch (SW) on the memory PWB is set as follows.
  - 1 meg = bit 1 is set to ON and bit 2 is set to OFF.
  - 2 meg = bit 1 is set to OFF and bit 2 is set to ON.
6. Connect the memory PWB to the following connector on the main PWB.
  - 7041 W/O Tag 42: CN5
  - 7042 & 7041 W/ Tag 42: CN4
7. Align the standoffs on the memory PWB with the holes on the PWB chassis.
8. Press the standoffs into the holes.
9. Reinstall in the PWB chassis.
  - a. Slide the PWB chassis into the machine until you can connect the following connector.
    - 7041 W/O Tag 42: CN2
    - 7042 & 7041 W/ Tag 42: CN3
  - b. Install the two screws retaining the PWB chassis to the machine.
10. Perform the system checks in section 1.

#### Memory chip option installation (USO,XCL,XLA) (7041 W/O Tag 42)

1. Switch off the power and disconnect the power cord from the left side of the machine.
2. Remove the two screws retaining the PWB chassis to the main chassis.
3. Slide the PWB chassis out of the machine until CN2 is visible.
4. Disconnect connector CN2 and remove the PWB chassis.
5. Remove the 1 Meg option PWB.

6. Remove the EPROM retainers on the memory PWB.
  - a. Slide the retainer towards the eprom align mark.
  - b. Lift off the retainer.
7. Install the EPROMS and reinstall the retainers.
8. Set the switch (SW) on the memory PWB as follows:
  - 2 meg = bit 1 is set to OFF and bit 2 is set to ON.
9. Connect the memory PWB to the connector CN5 on the main PWB.
10. Align the standoffs on the memory PWB with the holes on the PWB chassis.
11. Press the standoffs into the holes.
12. Reinstall in the PWB chassis.
  - a. Slide the PWB chassis into the machine until you can connect connector CN2.
  - b. Connect the connector CN2.
  - c. Install the two screws retaining the PWB chassis to the machine.
13. Perform the system checks in section 1.

## Removal Repack Kit

Repack kit, P/N 97K14750 should be ordered prior to machine removal.

### Procedure

1. Perform RAM initialization.
  - a. Press the [Service] key.
  - b. Enter [1101] from the keypad.
  - c. Press the [Start] key.
  - d. Enter [13] from the keypad.
  - e. Enter [1234] from the keypad.
2. Remove the following parts and place in bags. Apply tape where required.
  - Paper cassette.
  - Handset and cradle
  - Developer assembly and drum module.
  - Power cord
  - Fuser pad
  - Document tray
3. Disconnect the telephone line. Set the line as it was before installation.
4. Pack the machine.
  - a. Tape down the control panel.
  - b. Tape down the top cover.
  - c. Place the protective bag over the machine.
  - d. Place machine into the box.
5. Clean the surrounding area and complete any service reports.

## 7. Wiring Data

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### Introduction

This section contains connector and PWB locational drawings, power and ground circuit diagrams, and pin assignment information. This information is not specific to individual procedures but is provided for general reference.

The connectors in this product do not conform to the plug/jack (P/J) convention; all connectors in this product are identified as CNn (i.e. CN1).

Connector numbers may be repeated on more than one PWB. The CN numbers on mating connectors do not always match. For example, CN4 of the HV power supply connects to CN1 of the driver PWB.

## CN Locational (7041 W/O Tag 42)

Locate the connector number (CN) and the component name in the list below. The CN No. and component columns are in numeric and alphabetical order, respectively. Refer to the figure column to locate the appropriate locational drawing and to the pin page column to locate the connector/pin assignment list.

Table 1. CN Locational

CN No.	COMPONENT	Destination/Source	Fig.	Pin Pg.
CN1	Driver PWB	HV Power Supply	3	13
CN1	HV Power Supply	LV Power Supply	5	13
CN1	Interconnect PWB	Main PWB	4	13
CN1	LCU PWB	Telephone	4	14
CN1	Main Interconnect PWB	Main PWB	2	14
CN1	Main PWB	Main Interconnect PWB	2	14
CN1	Memory PWB (Option)	Main PWB	2	14
CN1	Setup PWB	Driver PWB	3	14
CN2	Driver PWB	HV Power Supply	3	14
CN2	HV Power Supply	<i>Not used.</i>	5	N/A
CN2	Interconnect PWB	Scanner Interlock	4	15
CN2	LCU PWB	Telephone Line	4	15
CN2	Main Interconnect PWB	HV Power Supply	2	15
CN2	Main PWB	Interconnect PWB	2	15
CN2	Setup PWB	Setup tool	3	N/A
CN3	Driver PWB	Auxiliary Tray	3	15
CN3	HV Power Supply	<i>Not used.</i>	5	N/A
CN3	Interconnect PWB	Document Sensors	4	15
CN3	LCU PWB	Handset	4	15
CN3	Main Interconnect PWB	HV Power Supply	2	16
CN3	Main PWB	LCU PWB	2	16
CN4	Driver PWB	Developer Assembly	3	16
CN4	HV Power Supply	Driver PWB	5	16

Table 1. CN Locational continued

CN No.	COMPONENT	Destination/Source	Fig.	Pin Pg.
CN4	Interconnect PWB	Video Module	4	16
CN4	LCU PWB	On Board Jumpers	4	16
CN4	Main PWB	Speaker	2	16
CN5	Driver PWB	Cassette Paper Sensor	3	16
CN5	HV Power Supply	Driver PWB	5	16
CN5	Interconnect PWB	Video Module	4	17
CN5	LCU PWB	On Board Jumpers	4	17
CN5	Main PWB	Memory PWB	2	17
CN6	Driver PWB	<i>Not used.</i>	3	N/A
CN6	HV Power Supply	Density Control	5	17
CN6	Interconnect PWB	Scan Motor	4	17
CN6	LCU PWB	Main PWB	4	17
CN7	Driver PWB	Driver PWB CN22	3	17
CN7	HV Power Supply	Main Interconnect PWB	5	17
CN7	Interconnect PWB	Control Panel Assembly	4	17
CN8	Driver PWB	Setup PWB	3	17
CN8	HV Power Supply	Main Interconnect PWB	5	17
CN9	Driver PWB	Drum Counter	3	18
CN9	HV Power Supply	Paper Sensor	5	18
CN10	Driver PWB	Laser	3	18
CN11	Driver PWB	Fuser Assembly	3	18
CN12	Driver PWB	Paper Output Sensor	3	18
CN13	Driver PWB	Fan	3	18
CN20	Driver PWB	Feed Solenoid	3	18
CN22	Driver PWB	Driver PWB CN7	3	18
CN23	Driver PWB	Print Motor	3	18
CN101	LV Power Supply	Fuser Assembly	5	18
CN201	LV Power Supply	HV Power Supply	5	18
CN202	LV Power Supply	PS Fan	5	18

## PWB Locational Drawing (7041 W/O Tag 42)

1. Control Panel Assembly
2. LV Power Supply
3. Interconnect PWB
4. LCU PWB
5. Driver PWB
6. Setup PWB
7. Main Interconnect PWB
8. HV Power Supply
9. Main PWB
10. Memory PWB

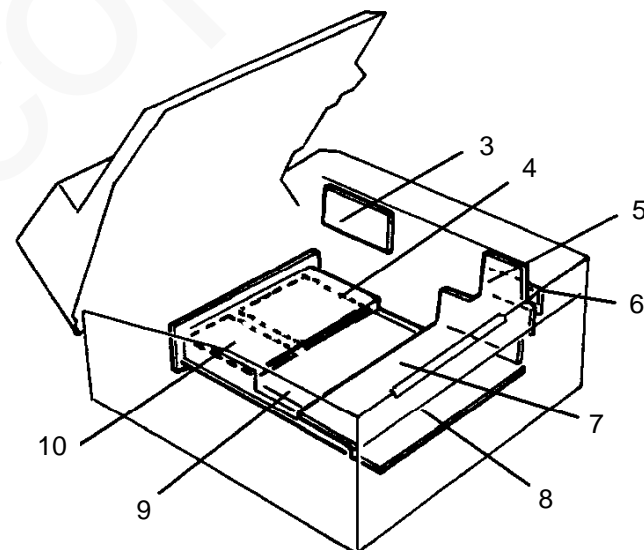
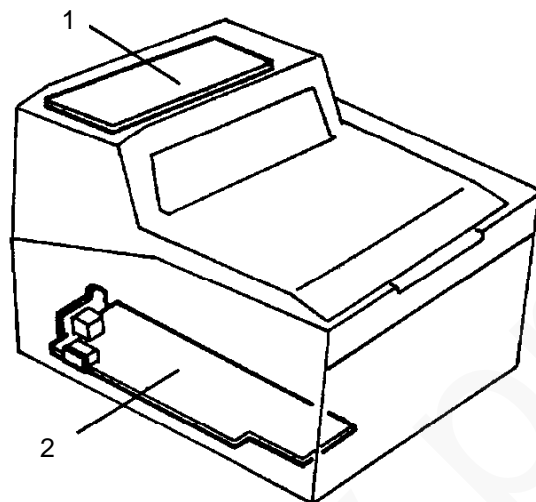


Figure 1. PWB Locational

## CN Locational Drawings (7041 W/O Tag 42)

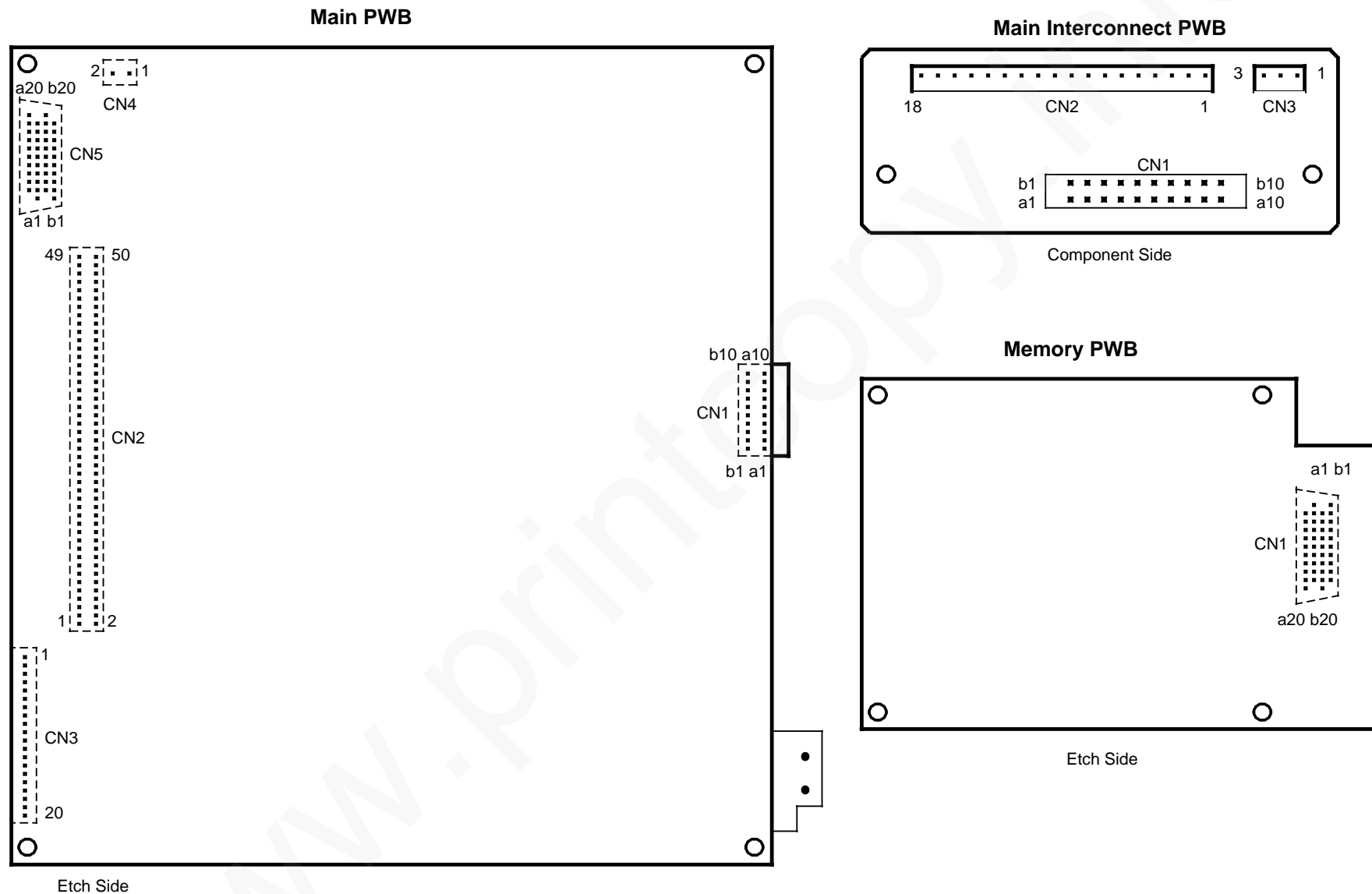


Figure 2. Main, Main Interconnect, and Memory CN Locational

## CN Locational Drawings (7041 W/O Tag 42)

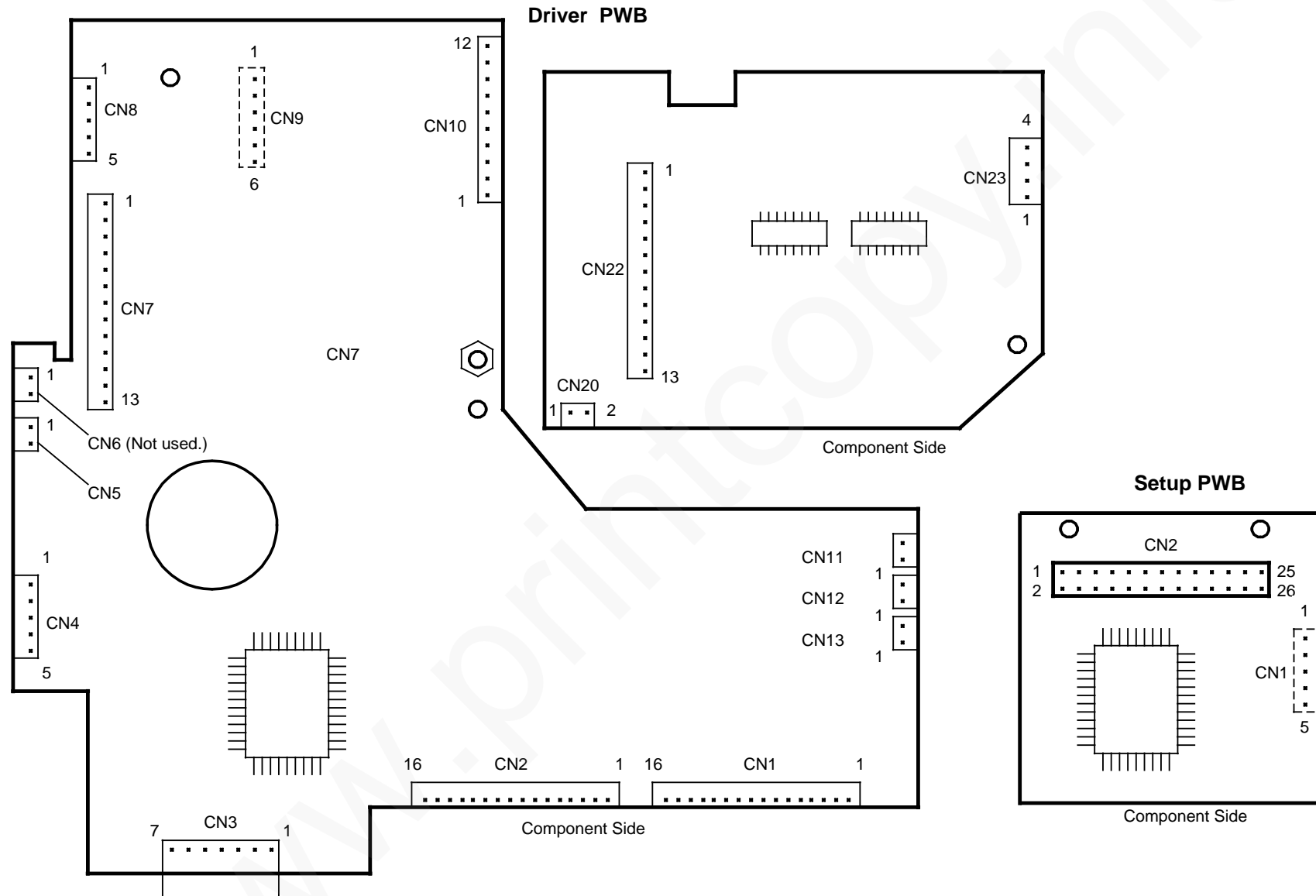


Figure 3. Driver and Setup CN Locational

## CN Locational Drawings (7041 W/O Tag 42)

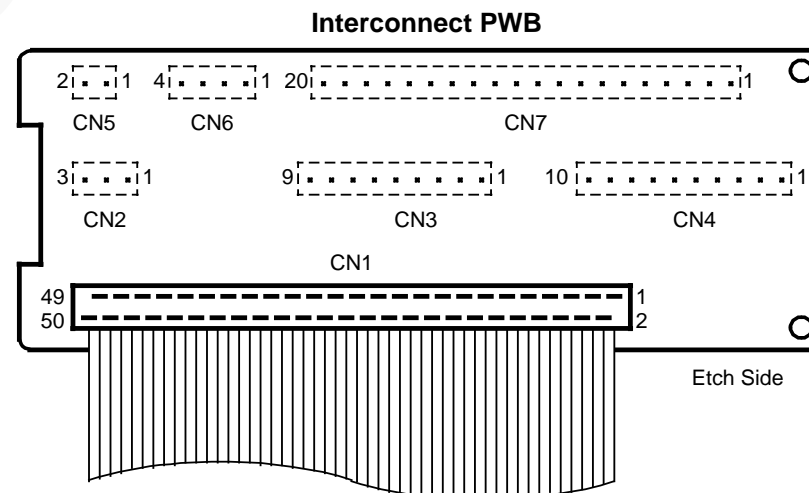
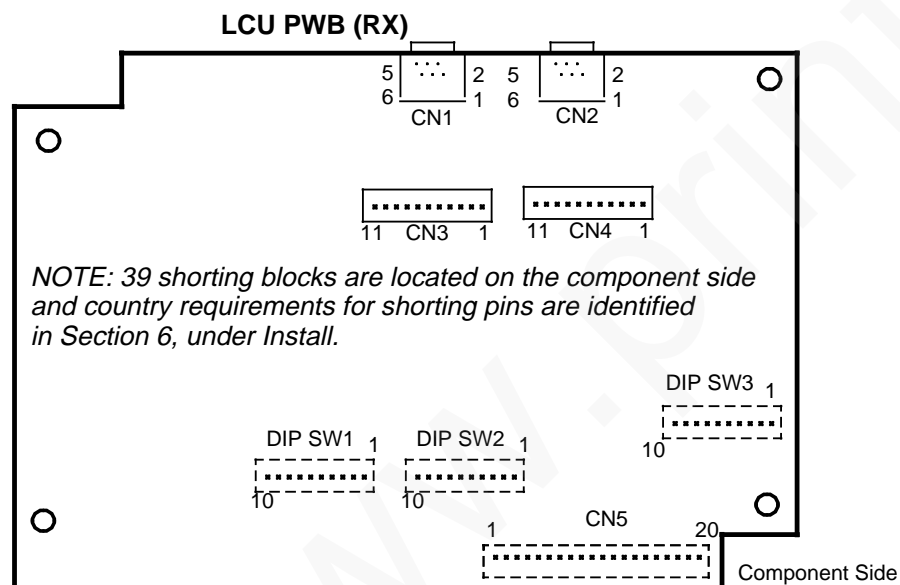
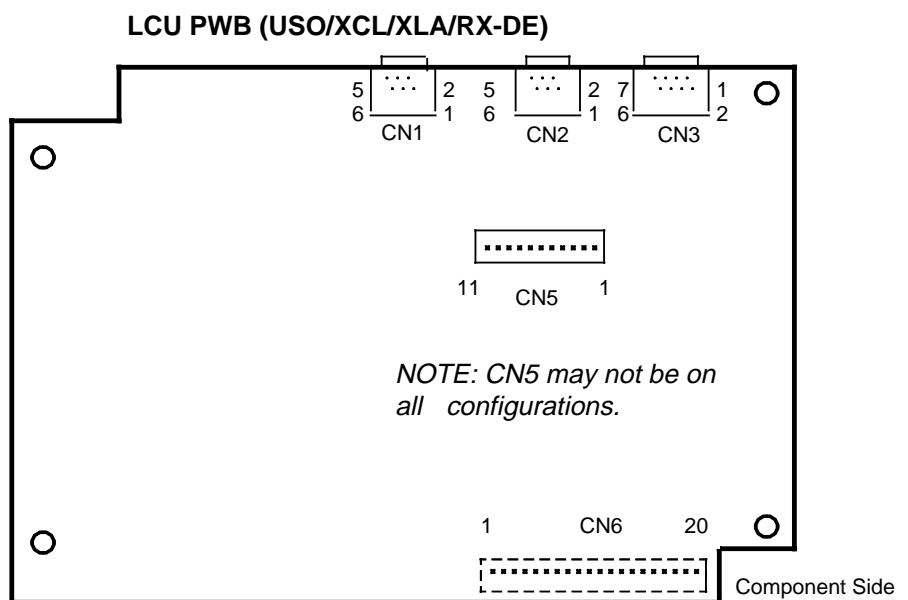


Figure 4. LCU and Interconnect CN Locational

## CN Locational Drawings (7041 W/O Tag 42)

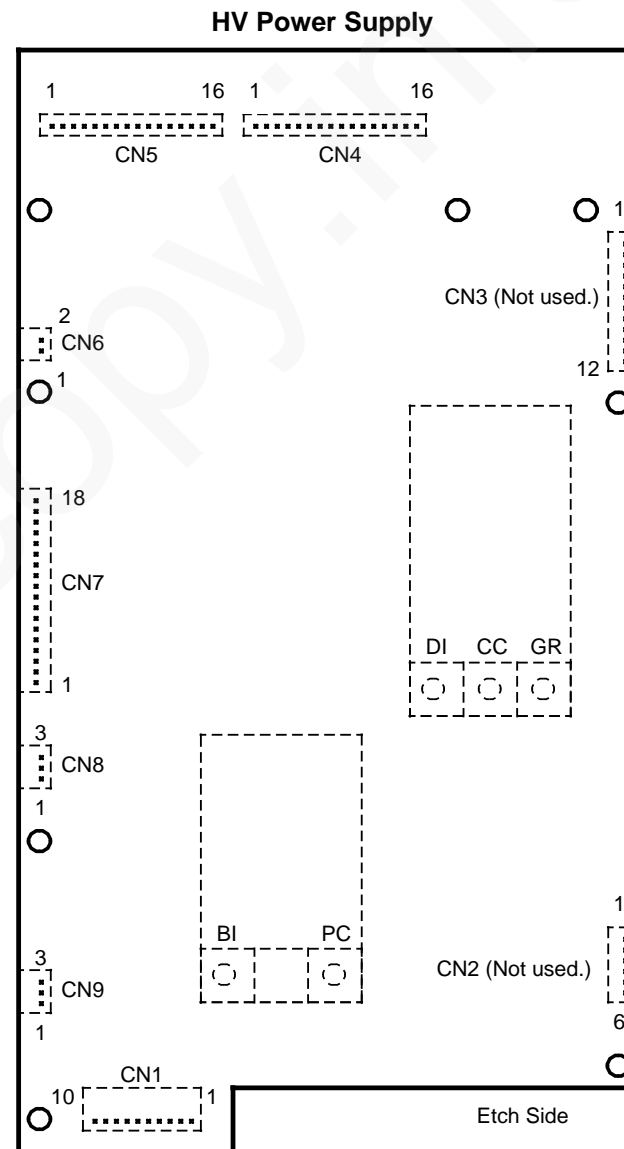
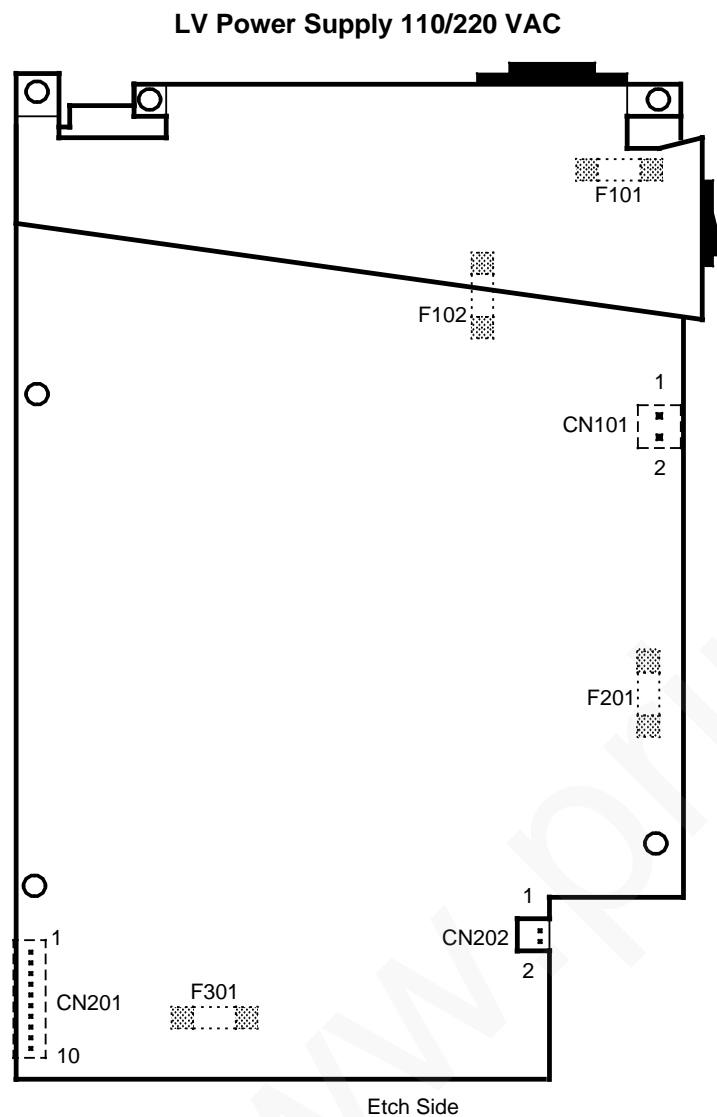


Figure 5. LV Power Supply and HV Power Supply CN Locational

# Interconnect Diagram (7041 W/O Tag 42)

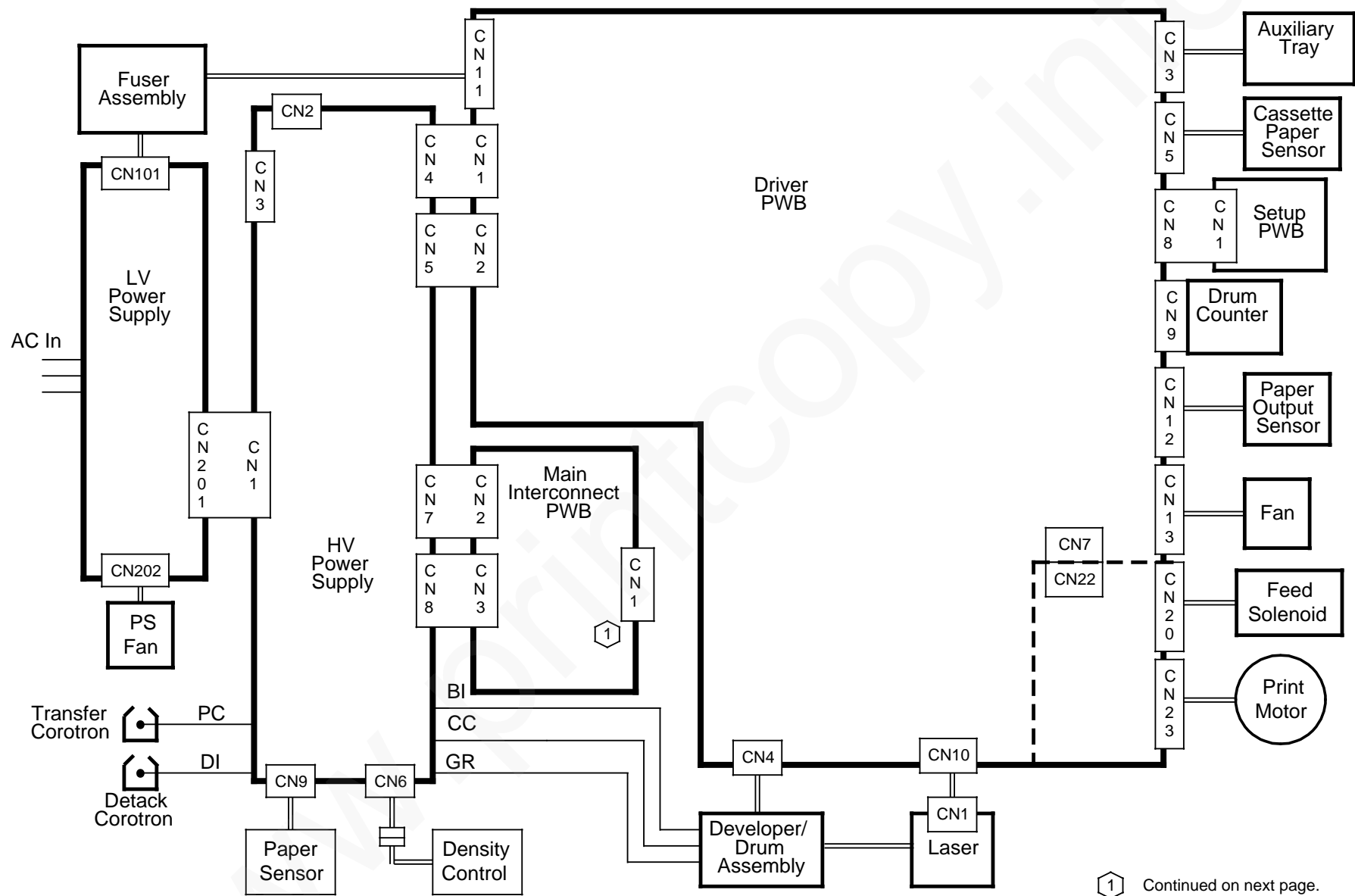


Figure 6. Interconnect Diagram



## Interconnect Diagram (7041 W/O Tag 42) continued

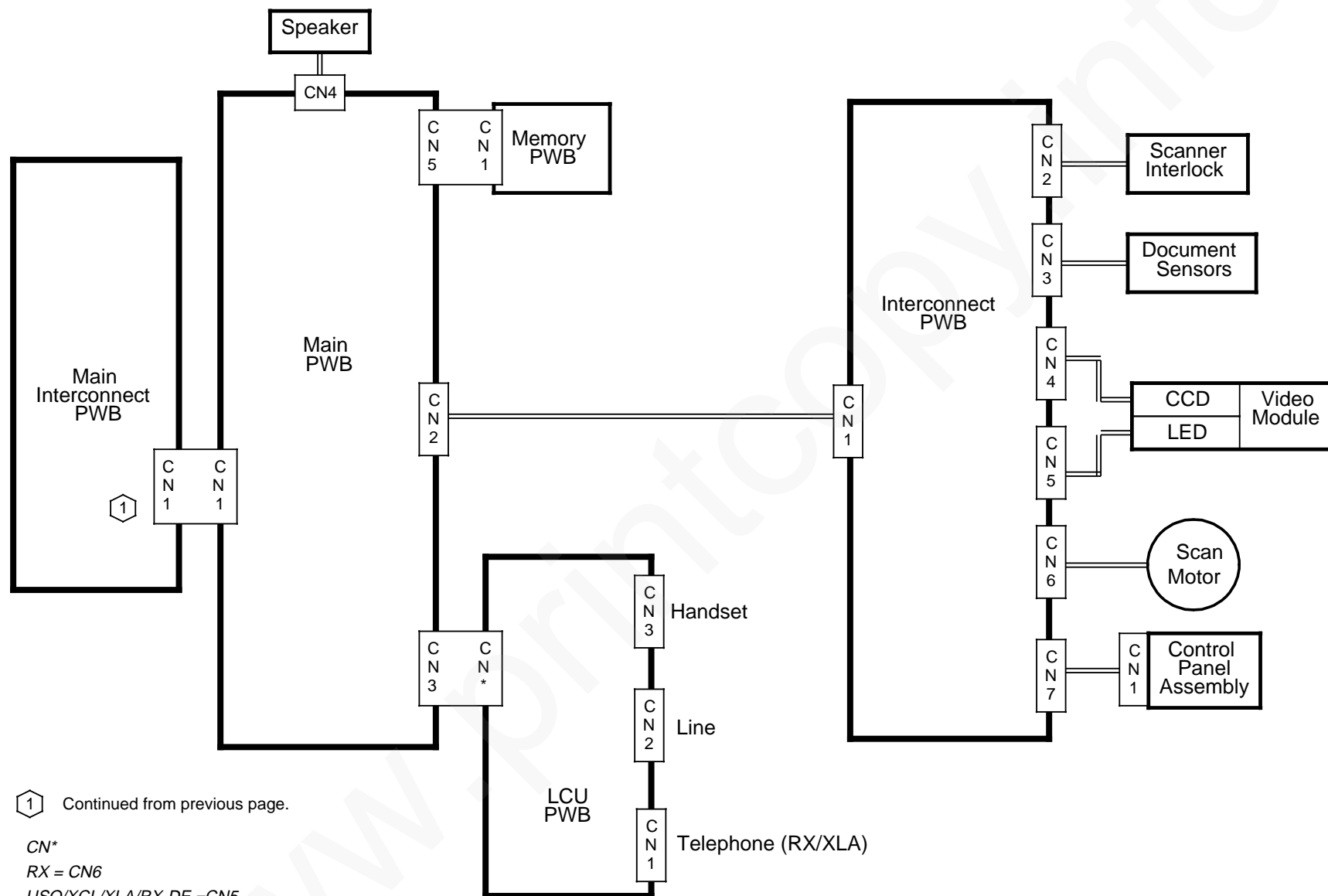


Figure 7. Interconnect Diagram

## DC Power & Ground Distribution (7041 W/O Tag 42)

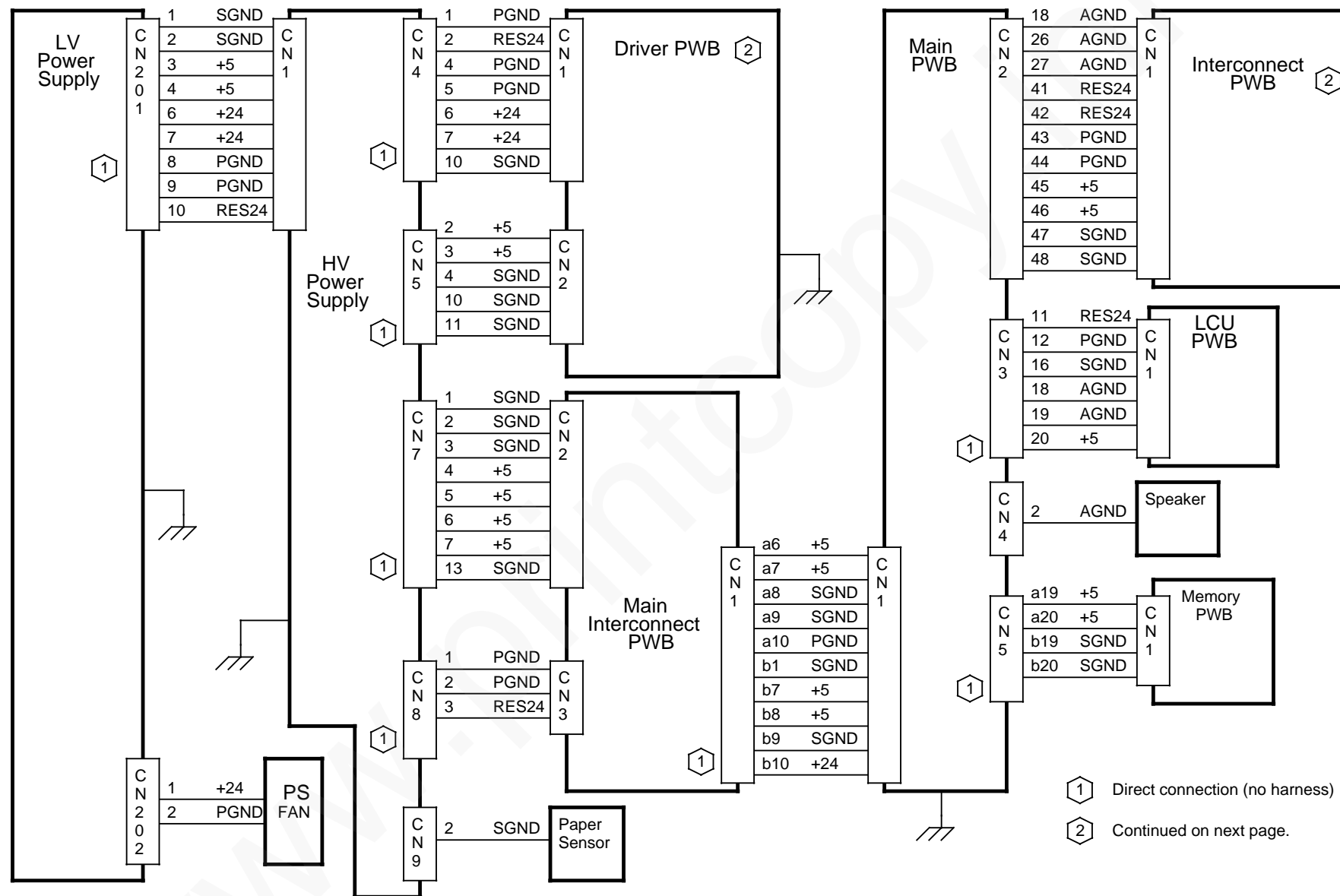


Figure 8. DC Power and Ground Distribution

DC Power & Ground Distribution (7041 W/O Tag 42) continued

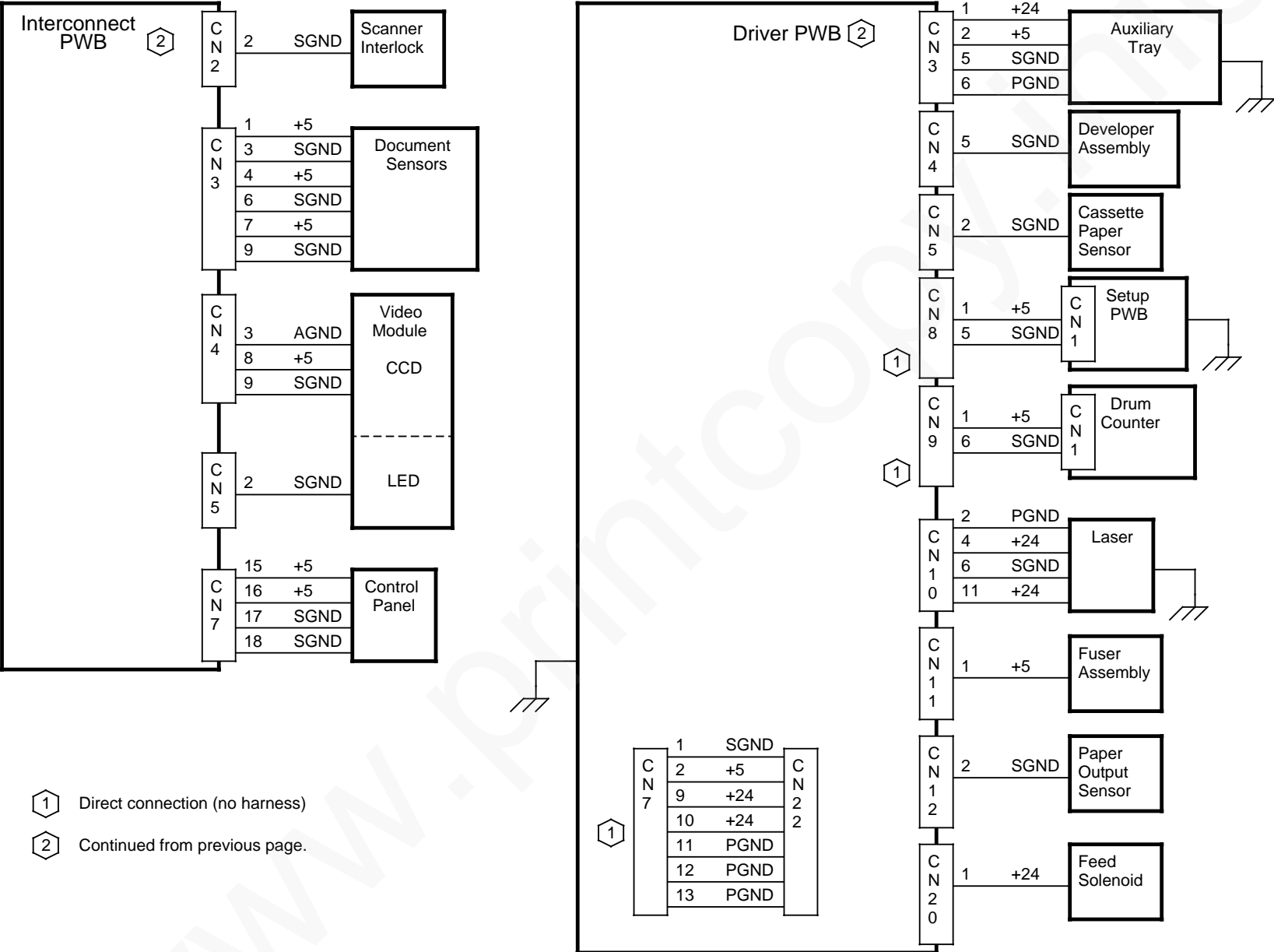


Figure 9. DC Power and Ground Distribution

## High Voltage Contacts (7041 W/O Tag 42)

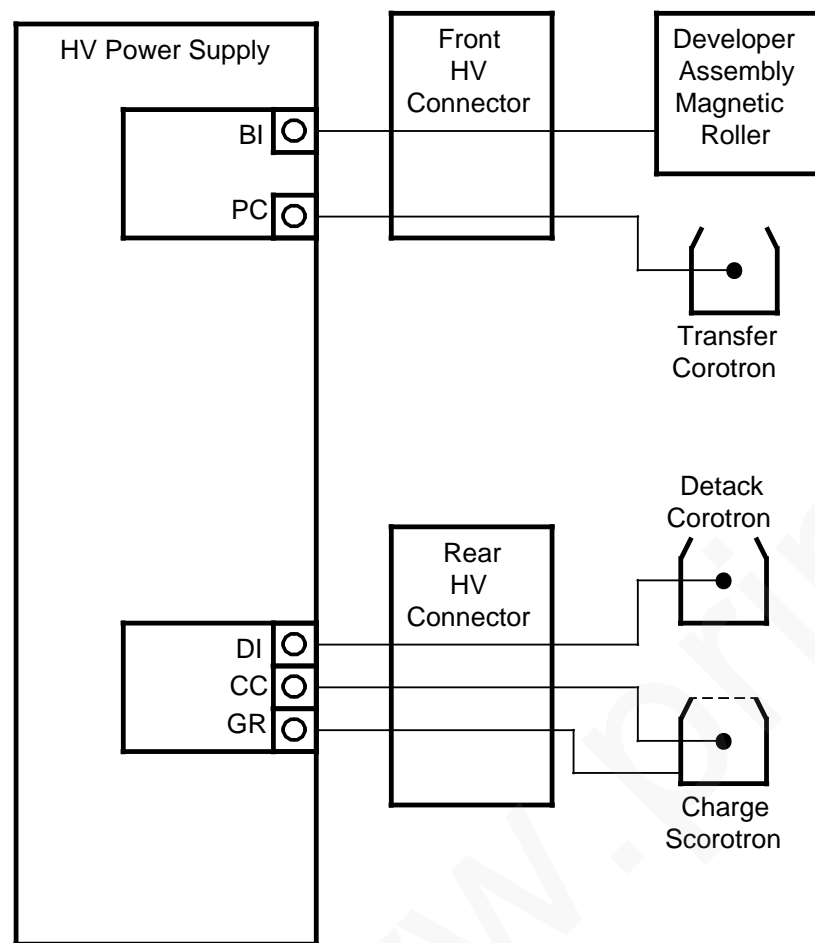


Figure 10. High Voltage Connections

## Chassis Ground Contacts

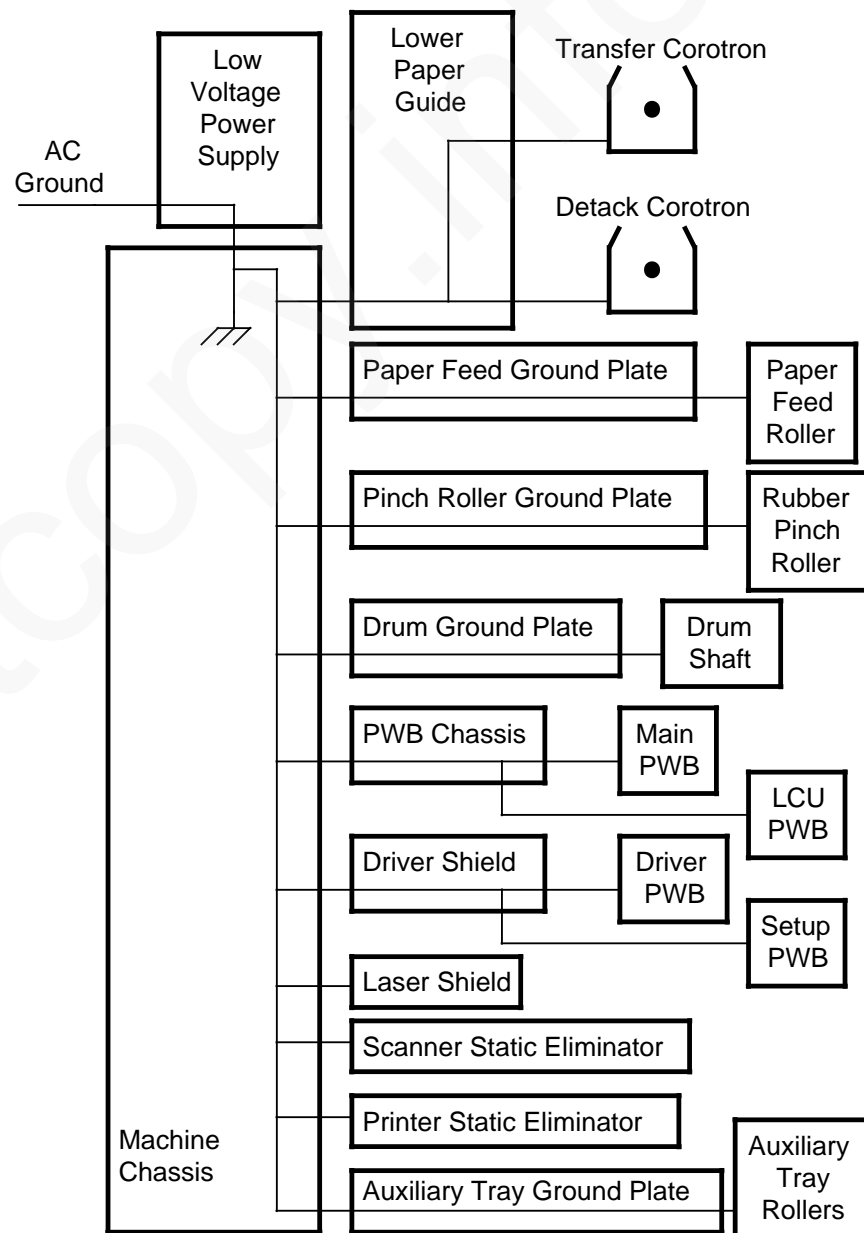


Figure 11. Chassis Ground Connections

## Connector/Pin Assignment (7041 W/O Tag 42)

Abbreviations which may be used in the pin assignment lists are as follows:

<b>Both</b>	<b>Signal is bi-directional</b>
<b>HVPS</b>	<b>HV power supply</b>
<b>Inter</b>	<b>Interconnect PWB</b>
<b>LVPS</b>	<b>LV power supply</b>
<b>Main Inter</b>	<b>Main interconnect PWB</b>

A complete list of signal mnemonics and descriptions is included in section 6.

*NOTE: The note at the end of each list refers to the mating connector or item, alternate lists for the information, and to USO or RX only designations.*

### CN1 Driver PWB

Pin	From	To	Signal
1			PGND
2	HVPS	Driver	RES24
3	HVPS	Driver	FS1
4			PGND
5			PGND
6	HVPS	Driver	+24
7	HVPS	Driver	+24
8	HVPS	Driver	+18
9	HVPS	Driver	+9
10			SGND
11	HVPS	Driver	AINPCH
12	HVPS	Driver	AINBIAS
13	HVPS	Driver	AINCCH
14	Driver	HVPS	PCDRV
15	Driver	HVPS	BIDRV
16	Driver	HVPS	CCDRV

*NOTE: Connects to the HV power supply CN4.*

### CN1 HV Power Supply

Pin	From	To	Signal
1			SGND
2			SGND
3	LVPS	HVPS	+5
4	LVPS	HVPS	+5
5	HVPS	LVPS	HEON0
6	LVPS	HVPS	+24
7	LVPS	HVPS	+24
8			PGND
9			PGND
10	LVPS	HVPS	RES24

*NOTE: Connects to the LV power supply CN201.*

### CN1 Interconnect PWB

Pin	From	To	Signal
1	Both	Both	BD0R
2	Both	Both	BD1R
3	Both	Both	BD2R
4	Both	Both	BD3R
5	Both	Both	BD4R
6	Both	Both	BD5R
7	Both	Both	BD6R
8	Both	Both	BD7R
9	Inter	Main	BA0
10	Inter	Main	BA1
11	Inter	Main	IOR
12	Inter	Main	IOW
13	Inter	Main	LCDER
14	Inter	Main	KEYCS
15	Inter	Main	BOOKSW
16	Inter	Main	VOUT
17	Main	Inter	RB

### CN1 Interconnect PWB continued

Pin	From	To	Signal
18	Main	Inter	AGND
19	Main	Inter	PAHI1
20	Main	Inter	PAHI2
21	Main	Inter	TR
22	Inter	Main	CS
23	Inter	Main	DOCSTB
24	Inter	Main	DOCA4
25	Inter	Main	DOCB4
26			AGND
27			AGND
28			
29	Inter	Main	COVER
30			
31	Main	Inter	OA0
32	Main	Inter	OA0
33	Main	Inter	OA
34	Main	Inter	OA
35	Main	Inter	OB0
36	Main	Inter	OB0
37	Main	Inter	OB
38	Main	Inter	OB
39	Main	Inter	+12
40	Main	Inter	+12
41	Main	Inter	RES24
42	Main	Inter	RES24
43			PGND
44			PGND
45	Main	Inter	+5
46	Main	Inter	+5
47			SGND
48			SGND
49	Main	Inter	LED24V
50	Main	Inter	LED24V

*NOTE: Connects to the main PWB CN2.*

**CN1 LCUPWB (RX only)**

Pin	From	To	Signal
1			
2			
3	Telephone	LCU	Tel1
4	Telephone	LCU	Tel2
5			
6			

NOTE: Connects to the telephone.

**CN1 Main PWB**

Pin	From	To	Signal

NOTE: Same as main interconnect PWB CN1.

**CN1 Main Interconnect PWB**

Pin	From	To	Signal
a1	Main Inter	Main	CRDY0
a2	Main Inter	Main	READY0
a3	Main	Main Inter	CMD
a4	Main Inter	Main	STS
a5	Main Inter	Main	POWER
a6			+5
a7			+5
a8			SGND
a9			SGND
a10			PGND
b1			SGND
b2			
b3	Main Inter	Main	VSU0
b4	Main Inter	Main	VCK0
b5	Main	Main Inter	VDA0
b6			
b7	Main	Main Inter	+5
b8	Main	Main Inter	+5
b9			SGND
b10	Main	Main Inter	RES24

NOTE: Connects to the main PWB CN1.

**CN1 Memory PWB**

Pin	From	To	Signal
a1	Main	Memory	A0
a2	Main	Memory	A1
a3	Main	Memory	A2
a4	Main	Memory	A3
a5	Main	Memory	A4
a6	Main	Memory	A5
a7	Main	Memory	A6
a8	Main	Memory	A7
a9	Main	Memory	A8
a10	Main	Memory	A9
a11	Main	Memory	A10
a12	Main	Memory	A11
a13	Main	Memory	A12
a14	Main	Memory	A13
a15	Main	Memory	A14
a16	Main	Memory	A15
a17	Main	Memory	A16
a18	Main	Memory	RAMST0
a19	Main	Memory	+5
a20	Main	Memory	+5
b1	Both	Both	D0
b2	Both	Both	D1
b3	Both	Both	D2
b4	Both	Both	D3
b5	Both	Both	D4
b6	Both	Both	D5
b7	Both	Both	D6
b8	Both	Both	D7
b9	Main	Memory	TCS00
b10	Main	Memory	TCS10
b11	Main	Memory	TCS20
b12	Main	Memory	TCS30
b13	Main	Memory	TCS40
b14	Main	Memory	BLA17
b15	Main	Memory	BLA18
b16	Main	Memory	WR0

**CN1 Memory PWB continued**

Pin	From	To	Signal
b17	Main	Memory	MOE0
b18	Main	Memory	RAMST1
b19			SGND
b20			SGND

NOTE: Connects to the main PWB CN5.

**CN1 Setup PWB**

Pin	From	To	Signal
1	Driver	Setup	+5
2	Driver	Setup	POWER
3	Both	Both	PD
4	Driver	Setup	PSCK0
5			SGND

NOTE: Connects to the driver PWB CN8.

**CN2 Driver PWB**

Pin	From	To	Signal
1	Driver	HVPS	HEON0
2	HVPS	Driver	+5
3	HVPS	Driver	+5
4			SGND
5			
6	Driver	HVPS	VDA0
7	HVPS	Driver	VCK0
8	HVPS	Driver	VSU0
9			
10			SGND
11			SGND
12	Driver	HVPS	CRDY0
13	Driver	HVPS	READY0
14	HVPS	Driver	CMD
15	Driver	HVPS	STS
16	Driver	HVPS	POWER

NOTE: Connects to the HV power supply CN5.

**CN2 Interconnect PWB**

Pin	From	To	Signal
1	Interlock	Inter	COVER
2			SGND
3			

NOTE: Connects to the scanner interlock.

**CN2 LCU PWB (USO/XCL/XLA)**

Pin	From	To	Signal
1			
2			
3	Line	LCU	L1
4	Line	LCU	L2
5			
6			

NOTE: Connects to the telephone line.

**CN2 LCU PWB (RX only)**

Pin	From	To	Signal
1			
2	Line	LCU	Tel1
3	Line	LCU	L1
4	Line	LCU	L2
5	Line	LCU	Tel2
6			

NOTE: Connects to the telephone line.

**CN2 Main PWB**

Pin	From	To	Signal

NOTE: Same as the interconnect PWB CN1.

**CN2 Main Interconnect PWB**

Pin	From	To	Signal
1			SGND
2			SGND
3			SGND
4	HVPS	Main Inter	+5
5	HVPS	Main Inter	+5
6	HVPS	Main Inter	+5
7	HVPS	Main Inter	+5
8			
9	Main Inter	HVPS	VDA0
10	HVPS	Main Inter	VCK0
11	HVPS	Main Inter	VSU0
12			
13			SGND
14	HVPS	Main Inter	CRDY0
15	HVPS	Main Inter	READY0
16	Main Inter	HVPS	CMD
17	HVPS	Main Inter	STS
18	HVPS	Main Inter	POWER

NOTE: Connects to the HV power supply CN7.

**CN3 Interconnect PWB**

Pin	From	To	Signal
1	Inter	Scan	+5
2	Scan	Inter	DOCSTB
3			SGND
4	Inter	A4	+5
5	A4	Inter	DOCA4
6			SGND
7	Inter	B4	+5
8	B4	Inter	DOCB4
9			SGND

NOTE: Connects to the document sensors.

**CN3 Driver PWB**

Pin	From	To	Signal
1	Driver	Cassette	+24
2	Driver	Cassette	+5
3	Driver	Cassette	PSCK0
4	Both	Both	PD
5			SGND
6			PGND
7	Driver	Cassette	POWER

NOTE: Connects to the auxiliary tray.

**CN3LCU PWB (USO/XCL/XLA)**

Pin	From	To	Signal
1	Handset	LCU	MIC+
2	Handset	LCU	MIC-
3	Handset	LCU	HOOK
4			
5			
6			SGND
7	LCU	Handset	SP+
8	LCU	Handset	SP-

NOTE: Connects to handset.

**CN3LCU PWB (RX: GB, NZ, HK)**

From	To
Pin 2	Pin 11
Pin 3	Pin 9
Pin 5	Pin 10

NOTE: Jumper wires required.

**CN3LCU PWB (RX: All countries except GB, NZ, HK, SE)**

From	To
Pin 3	Pin 11
Pin 4	Pin 10

NOTE: Jumper wires required. No CN3 required for SE.

**CN3 Main PWB**

Pin	From	To	Signal
1	Main	LCU	TXA
2	Main	LCU	CML
3	LCU	Main	DHOOK0
4	Main	LCU	DIAL
5	Main	LCU	LD
6			
7	LCU	Main	RXA
8	LCU	Main	LOOP0
9	LCU	Main	CIS
10	LCU	Main	DIALT0
11	Main	LCU	RES24
12			PGND
13			
14	Main	LCU	+12
15	Main	LCU	OPHS
16			SGND
17	Main	LCU	-12
18			AGND
19			AGND
20	Main	LCU	+5

**NOTES**

- Connects to the LCU PWB CN5 on RX and CN6 on USO / XCL / XLA.
- USO / XCL / XLA: Pin 10 not connected. RX Pins 3 and 15 not connected. Some countries pin 10 not connected.

**CN3 Main Interconnect PWB**

Pin	From	To	Signal
1			PGND
2			PGND
3	HVPS	Main Inter	RES24

NOTE: Connects to the HV power supply CN8.

**CN4 HV Power Supply**

Pin	From	To	Signal

NOTE: Same as the Driver PWB CN1.

**CN4 Driver PWB**

Pin	From	To	Signal
1	Driver	Developer	MG+
2	Developer	Driver	MG-
3	Driver	Developer	SPPLY5
4	Developer	Driver	ANLGTE
5			SGND

NOTE: Connects to the developer assembly.

**CN4 Interconnect PWB**

Pin	From	To	Signal
1	Video	Inter	VOUT
2	Inter	Video	RB
3			AGND
4	Inter	Video	PAHI1
5	Inter	Video	PAHI2
6	Inter	Video	TR
7	Video	Inter	CS
8	Inter	Video	+5
9			SGND
10	Inter	Video	+12

NOTE: Connects to the video module.

**CN4 LCU PWB (RX: All countries except GB, NZ, HK, IT, SE)**

From	To
Pin 3	Pin 10
Pin 4	Pin 9

NOTE: Jumpers wires required.

**CN4 LCU PWB (RX: GB, NZ, HK)**

From	To
Pin 2	Pin 10
Pin 3	Pin 7
Pin 5	Pin 9

NOTE: Jumpers wires required.

**CN4 LCU PWB (RX: IT, SE)**

From	To
Pin 2	Pin 11
Pin 3	Pin 10
Pin 4	Pin 9
Pin 5	Pin 8

NOTE: Jumpers wires required.

**CN4 Main PWB**

Pin	From	To	Signal
1	Main	Speaker	SP
2			AGND

NOTE: Connects to the speaker.

**CN5 Driver PWB**

Pin	From	To	Signal
1	Sensor	Driver	ANLGPE
2			SGND

NOTE: Connects to the cassette paper sensor.

**CN5 HV Power Supply**

Pin	From	To	Signal

NOTE: Same as the driver PWB CN2.



**CN5 Interconnect PWB**

Pin	From	To	Signal
1	Inter	Video	+22
2			SGND

NOTE: Connects to the video module.

**CN5 LCUPWB(USO/XCL)**

From	To
Pin 3	Pin 10
Pin 4	Pin 9

NOTE: Jumper wires required.

**CN5 LCUPWB(XLA)**

From	To

NOTE: Jumper wires TBD.

**CN5 LCUPWB(RX-DE only)**

From	To
Pin 1 *	Pin 7 *
Pin 2	Pin 11
Pin 3	Pin 10
Pin 4	Pin 9
Pin 5	Pin 8

NOTE: Pin 1 \* to pin 7 \* jumper required to enable ground start.

**CN5 MAIN PWB**

Pin	From	To	Signal

NOTE: Same as the memory PWB CN1.

**CN6 HV Power Supply**

Pin	From	To	Signal
1	HVPS	Control	BIVR1
2	Control	HVPS	BIVR2

NOTE: Connects to the density control.

**CN6 Interconnect PWB**

Pin	From	To	Signal
1	Inter	Motor	OA
2	Inter	Motor	OA0
3	Inter	Motor	OB
4	Inter	Motor	OB0

NOTE: Connects to the scan motor.

**CN6 LCUPWB(USO/XCL/XLA)**

Pin	From	To	Signal

NOTE: Same as main PWB CN3.

**CN7 Driver PWB**

Pin	From	To	Signal
1			SGND
2	Driver	Driver	+5
3	Driver	Driver	FDCRO
4	Driver	Driver	FDCR1
5			
6	Driver	Driver	CFON1
7	Driver	Driver	FDB1
8	Driver	Driver	FDA1
9	Driver	Driver	+24
10	Driver	Driver	+24
11			PGND
12			PGND
13			PGND

NOTE: Connects to the driver PWB CN22.

**CN7 HV Power Supply**

Pin	From	To	Signal

NOTE: Same as main interconnect PWB CN2.

**CN7 Interconnect PWB**

Pin	From	To	Signal
1	Both	Both	BD0R
2	Both	Both	BD1R
3	Both	Both	BD2R
4	Both	Both	BD3R
5	Both	Both	BD4R
6	Both	Both	BD5R
7	Both	Both	BD6R
8	Both	Both	BD7R
9	Inter	Panel	BA0
10	Inter	Panel	BA1
11	Inter	Panel	IOR
12	Inter	Panel	IOW
13	Inter	Panel	LCDER
14	Inter	Panel	KEYCS
15	Inter	Panel	+5
16	Inter	Panel	+5
17			SGND
18			SGND
19	Inter	Panel	BOOKSW
20			

NOTE: Connects to the control panel assembly.

**CN8 Driver PWB**

Pin	From	To	Signal

NOTE: Same as setup PWB CN1.

**CN8 HV Power Supply**

Pin	From	To	Signal

NOTE: Same as main interconnect PWB CN3.

**CN9 Driver PWB**

Pin	From	To	Signal
1	Driver	Counter	+5
2	Driver	Counter	DRCS
3	Driver	Counter	DRSCK
4	Driver	Counter	DRD1
5	Counter	Driver	DRD0
6			SGND

NOTE: Connects to the drum counter.

**CN9 HV Power Supply**

Pin	From	To	Signal
1	Sensor	HVPS	FS1D
2			SGND
3	Sensor	HVPS	FS1

NOTE: Connects to the paper sensor.

**CN10 Driver PWB**

Pin	From	To	Signal
1	Laser	Driver	POSYN0
2			PGND
3	Driver	Laser	POD0
4	Driver	Laser	+24
5	Driver	Laser	+9
6			SGND
7	Laser	Driver	UFE0
8	Driver	Laser	LD0
9	Driver	Laser	LSPWRC
10	Laser	Driver	ANLGLM
11	Driver	Laser	+24
12	Laser	Driver	DCLED

NOTE: Connects to the laser.

**CN11 Driver PWB**

Pin	From	To	Signal
1	Driver	Fuser	+5
2	Fuser	Driver	AINTH

NOTE: Connects to the fuser assembly.

**CN12 Driver PWB**

Pin	From	To	Signal
1	Sensor	Driver	FS2
2			SGND

NOTE: Connects to the paper output sensor.

**CN13 Driver PWB**

Pin	From	To	Signal
1	Driver	Fan	FDON
2	Fan	Driver	AINFN

NOTE: Connects to the fan.

**CN20 Driver PWB**

Pin	From	To	Signal
1	Driver	Solenoid	+24
2	Solenoid	Driver	CFON0

NOTE: Connects to the feed solenoid.

**CN22 Driver PWB**

Pin	From	To	Signal

NOTE: Same as driver PWB CN7.

**CN23 Driver PWB**

Pin	From	To	Signal
1	Driver	Motor	PHA
2	Driver	Motor	PHC
3	Driver	Motor	PHB
4	Driver	Motor	PHD

NOTE: Connects to the print motor.

**CN101 LV Power Supply**

Pin	From	To	Signal
1	LVPS	Fuser	AC
2	LVPS	Fuser	AC

NOTE: Connects to the fuser assembly.

**CN201 LV Power Supply**

Pin	From	To	Signal

NOTE: Same as HV power supply CN1.

**CN202 LV Power Supply**

Pin	From	To	Signal
1	LVPS	PS Fan	+24
2			PGND

NOTE: Connects to the PS fan.

## CN Locational (7042 & 7041 W/ Tag 42)

Locate the connector number (CN) and the component name in the list below. The CN No. and component columns are in numeric and alphabetical order, respectively. Refer to the figure column to locate the appropriate locational drawing and to the page column to locate the connector/pin assignment list.

Table 1. CN Locational

CN No.	COMPONENT	Destination/Source	Fig.	Pin Pg.
CN1	Driver PWB	HV Power Supply	3	31
CN1	HV Power Supply	LV Power Supply	5	31
CN1	Interconnect PWB	Main PWB	4	31
CN1	LCU PWB	Telephone	4	31
CN1	Main Interconnect PWB	Main PWB	2	31
CN1	Main PWB	Main Interconnect PWB	2	31
CN1	Memory PWB (Option)	Main PWB	2	31
CN1	Setup PWB	Driver PWB	3	31
CN2	Driver PWB	HV Power Supply	3	31
CN2	HV Power Supply	<i>Not used.</i>	5	N/A
CN2	Interconnect PWB	Control Panel Assembly	4	32
CN2	LCU PWB	Telephone Line	4	32
CN2	Main PWB	LCU PWB	2	32
CN2	Main Interconnect PWB	HV Power Supply	2	32
CN2	Setup PWB	Setup tool	3	N/A
CN3	Driver PWB	Auxiliary Tray	3	32
CN3	HV Power Supply	<i>Not used.</i>	5	N/A
CN3	Interconnect PWB	Document Sensors	4	33
CN3	LCU PWB	Handset	4	33
CN3	Main PWB	Interconnect PWB	2	33
CN3	Main Interconnect PWB	HV Power Supply	2	33
CN4	Driver PWB	Developer Assembly	3	33
CN4	HV Power Supply	Driver PWB	5	33
CN4	Interconnect PWB	Scanner Interlock	4	33

Table 1. CN Locational continued

CN No.	COMPONENT	Destination/Source	Fig.	Pin Pg.
CN4	LCU PWB	On Board Jumpers	4	33
CN4	Main PWB	Memory PWB	2	33
CN5	Main PWB	Speaker	2	34
CN5	Driver PWB	Cassette Paper Sensor	3	34
CN5	HV Power Supply	Driver PWB	5	34
CN5	Interconnect PWB	Scan Motor	4	34
CN5	LCU PWB	On Board Jumpers	4	34
CN6	Driver PWB	<i>Not used.</i>	3	N/A
CN6	HV Power Supply	<i>Not used</i>	5	N/A
CN6	Interconnect PWB	Video Module (CIS)	4	34
CN6	LCU PWB	Main PWB	4	34
CN7	Driver PWB	Driver PWB CN22	3	34
CN7	HV Power Supply	Main Interconnect PWB	5	34
CN8	Driver PWB	Setup PWB	3	34
CN8	HV Power Supply	Main Interconnect PWB	5	35
CN9	Driver PWB	Drum Counter	3	35
CN9	HV Power Supply	Paper Sensor	5	35
CN10	Driver PWB	Laser	3	35
CN11	Driver PWB	Fuser Assembly	3	35
CN12	Driver PWB	Paper Output Sensor	3	35
CN13	Driver PWB	Fan	3	35
CN20	Driver PWB	Feed Solenoid	3	35
CN22	Driver PWB	Driver PWB CN7	3	35
CN23	Driver PWB	Print Motor	3	35
CN101	LV Power Supply	Fuser Assembly	5	35
CN201	LV Power Supply	HV Power Supply	5	35

## PWB Locational Drawing (7042 & 7041 W/ Tag 42)

1. Control Panel Assembly
2. LV Power Supply
3. Interconnect PWB
4. LCU PWB
5. Driver PWB
6. Setup PWB
7. Main Interconnect PWB
8. HV Power Supply
9. Main PWB
10. Memory PWB

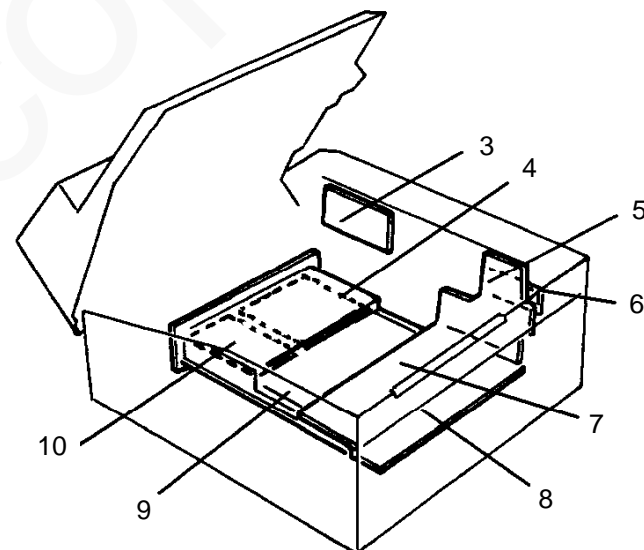
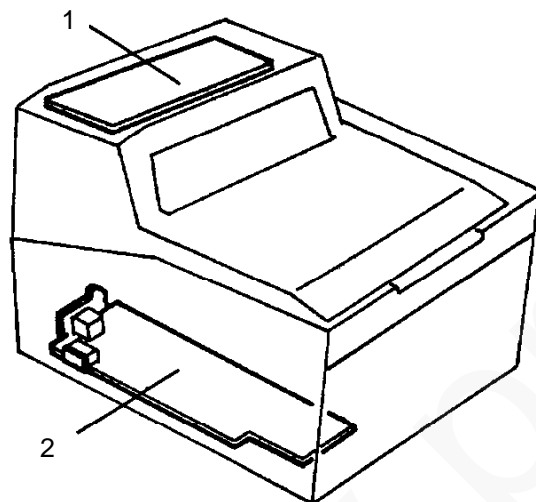


Figure 1. PWB Locational

# CN Locational Drawings (7042 & 7041 W/ Tag 42)

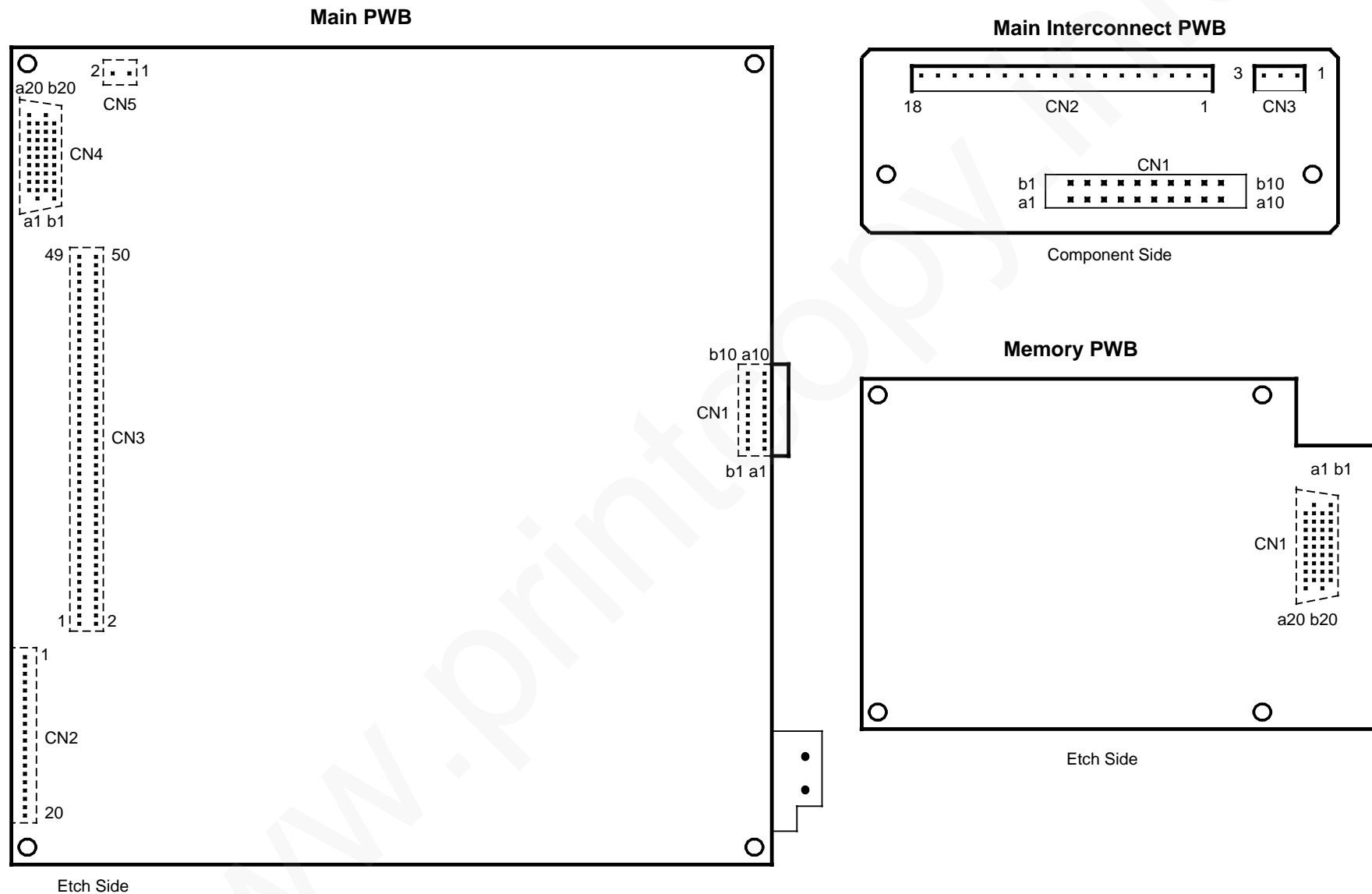


Figure 2. Main, Main Interconnect, and Memory CN Locational

## CN Locational Drawings (7042 & 7041 W/ Tag 42)

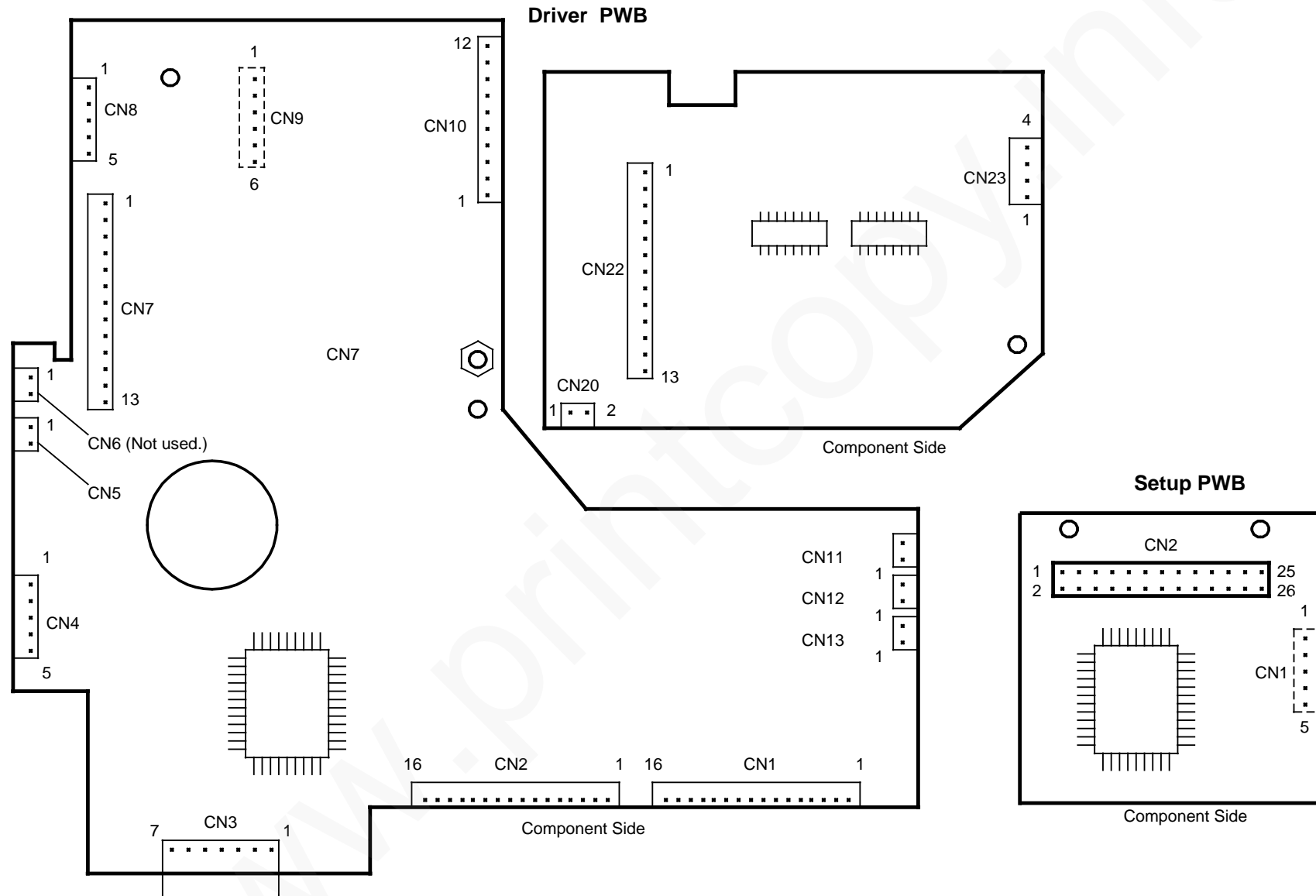


Figure 3. Driver and Setup CN Locational

## CN Locational Drawings (7042 & 7041 W/ Tag 42)

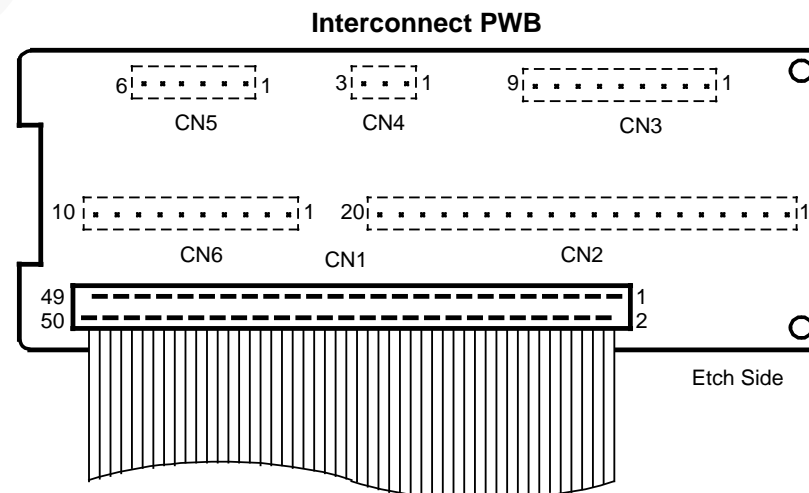
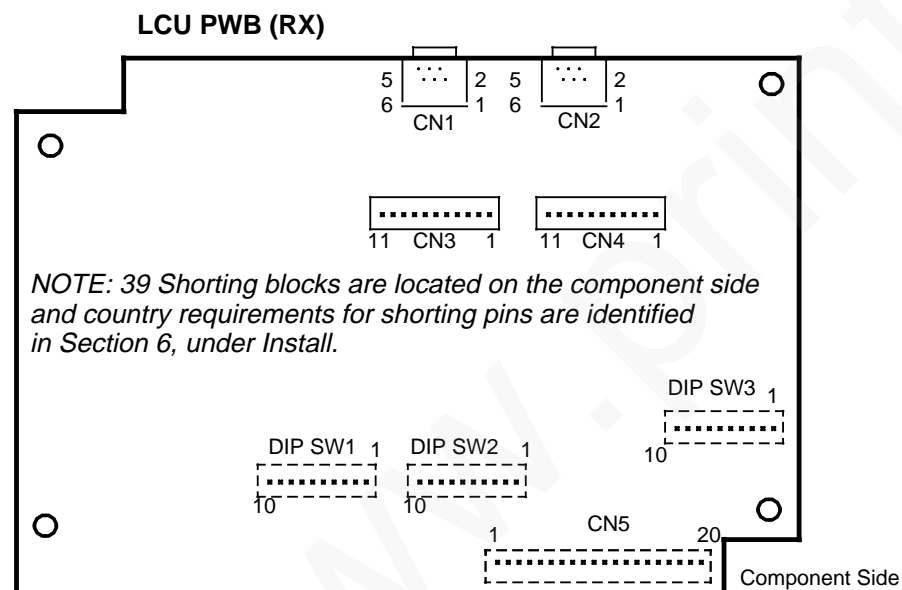
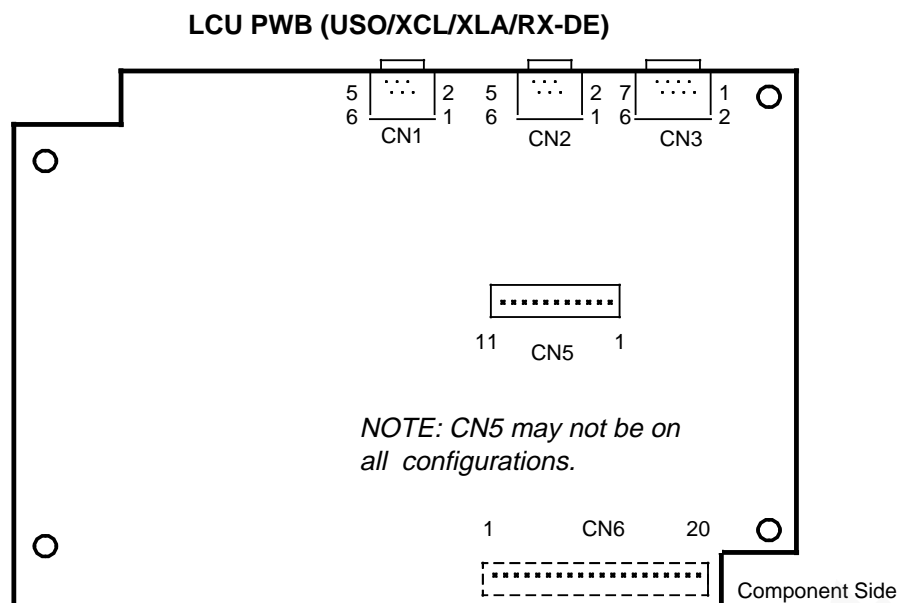


Figure 4. LCU and Interconnect CN Locational

# CN Locational Drawings (7042 & 7041 W/ Tag 42)

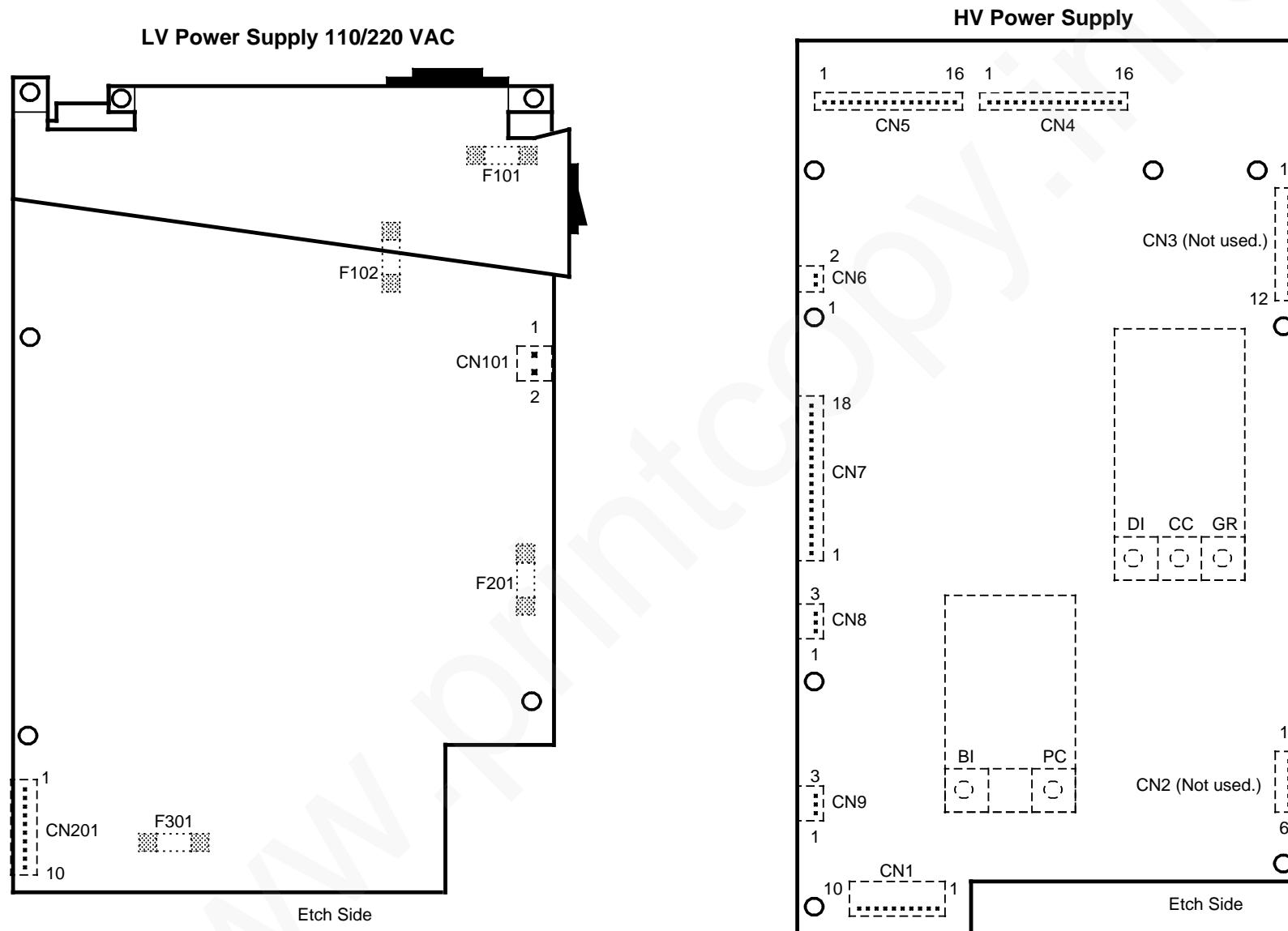


Figure 5. LV Power Supply and HV Power Supply CN Locational



# Interconnect Diagram (7042 & 7041 W/ Tag 42)

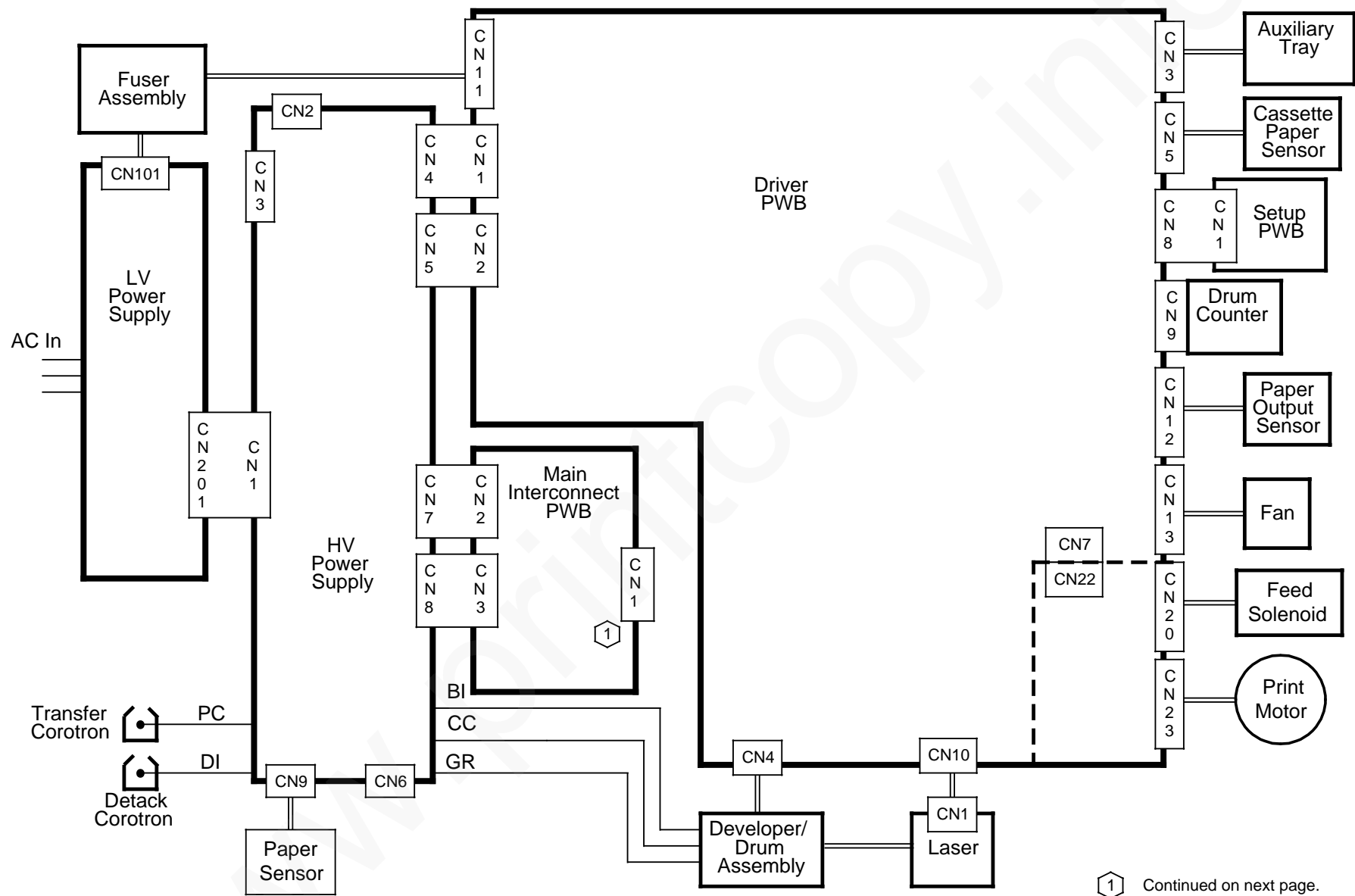


Figure 6. Interconnect Diagram

## Interconnect Diagram (7042 & 7041 W/ Tag 42) continued

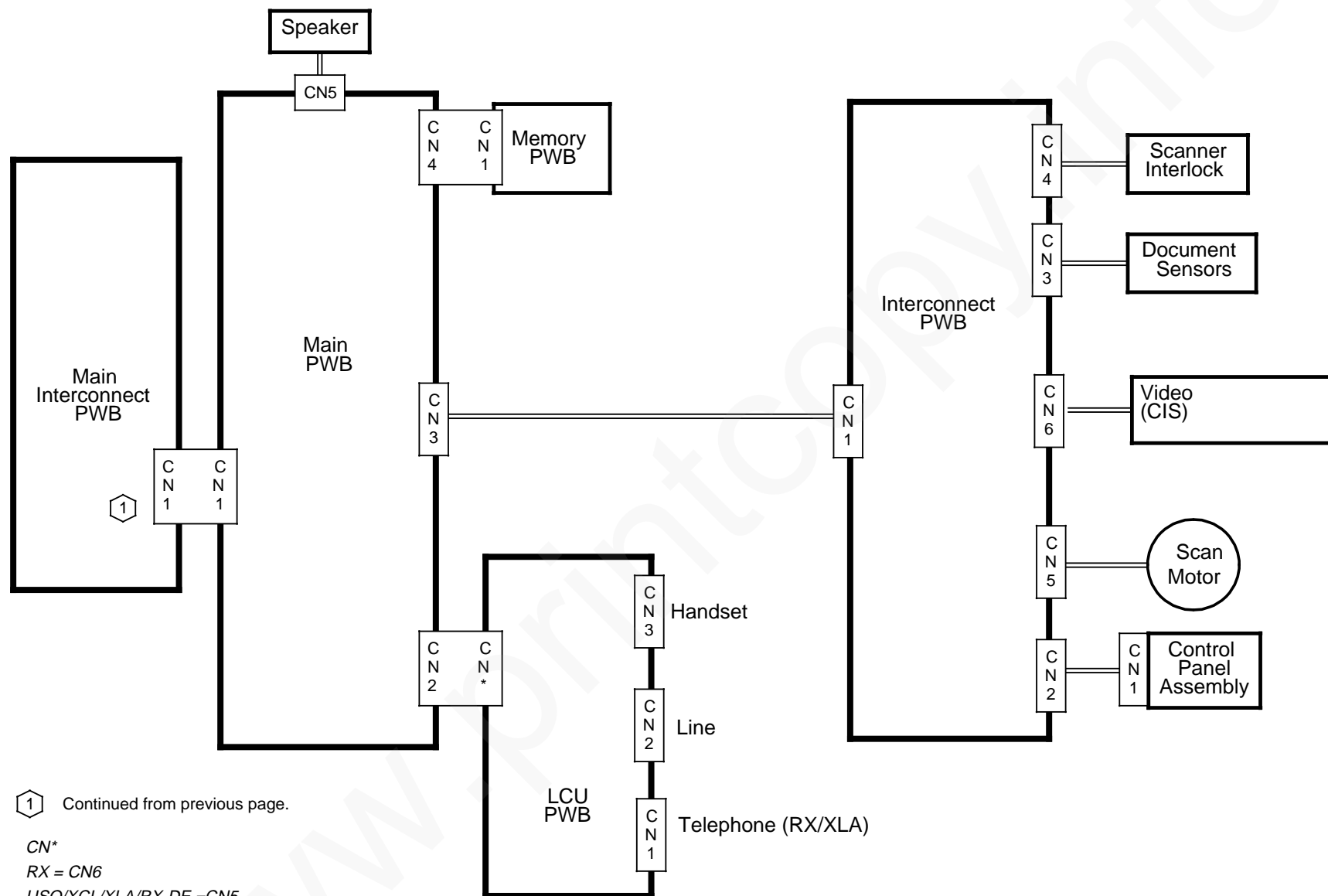


Figure 7. Interconnect Diagram

## DC Power & Ground Distribution (7042 & 7041 W/ Tag 42)

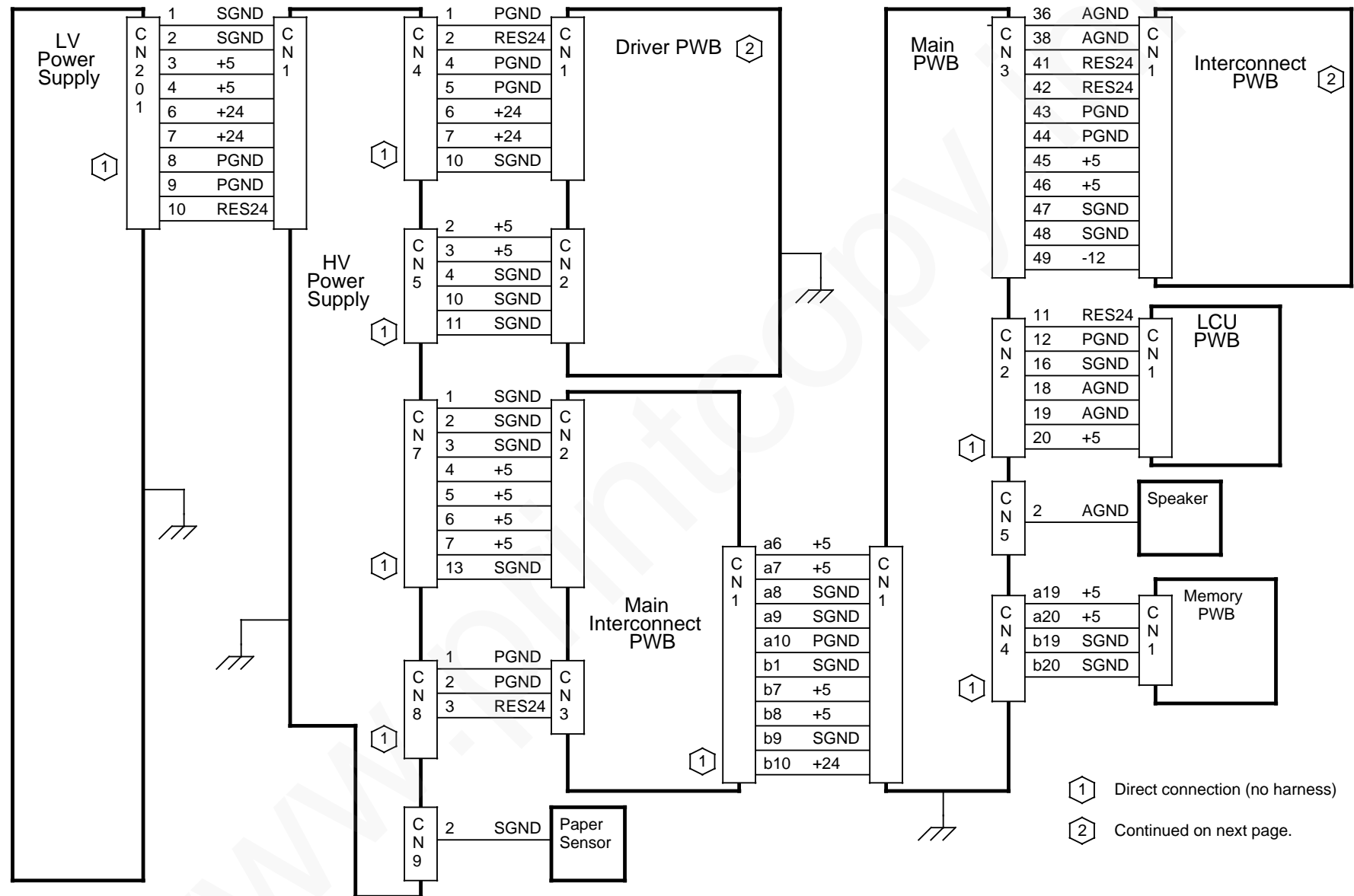


Figure 8. DC Power and Ground Distribution

## DC Power & Ground Distribution continued (7042 & 7041 W/ Tag 42)

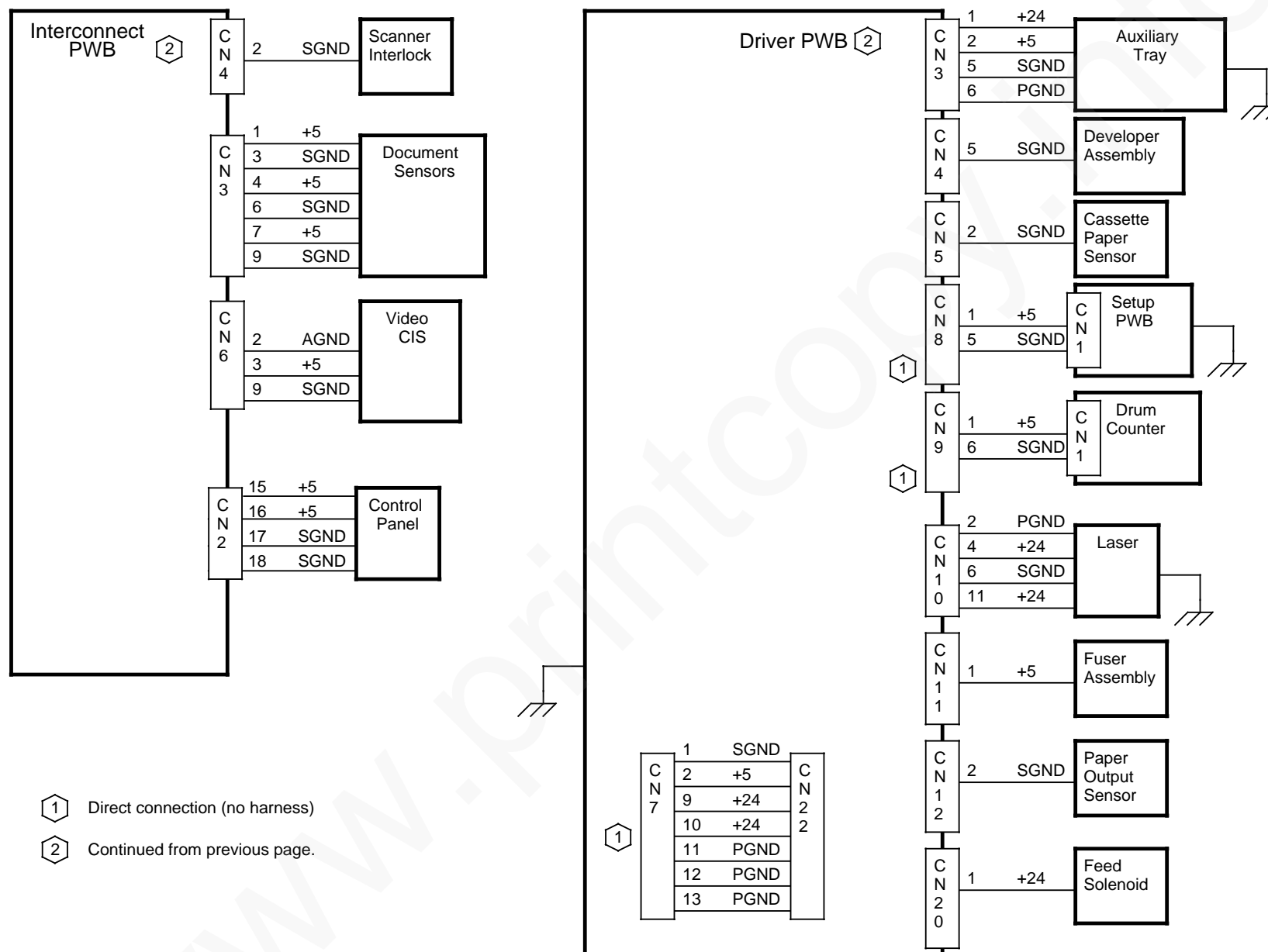


Figure 9. DC Power and Ground Distribution

## High Voltage Contacts (7042 & 7041 W/ Tag 42)

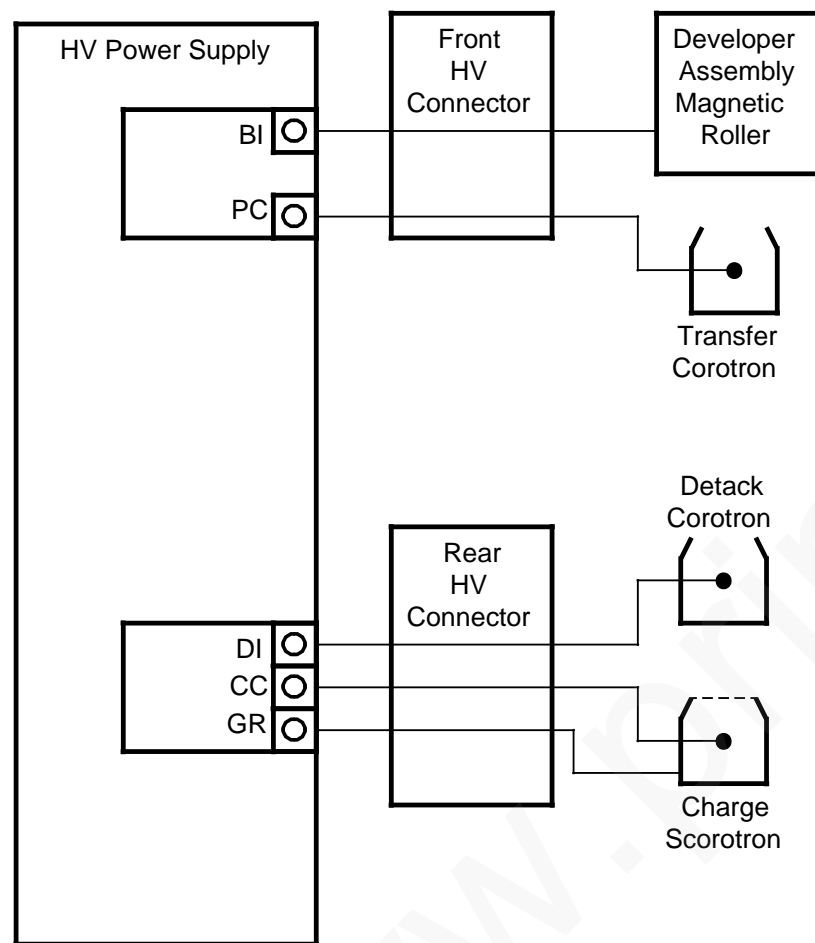


Figure 10. High Voltage Connections

## Chassis Ground Contacts (7042 & 7041 W/ Tag 42)

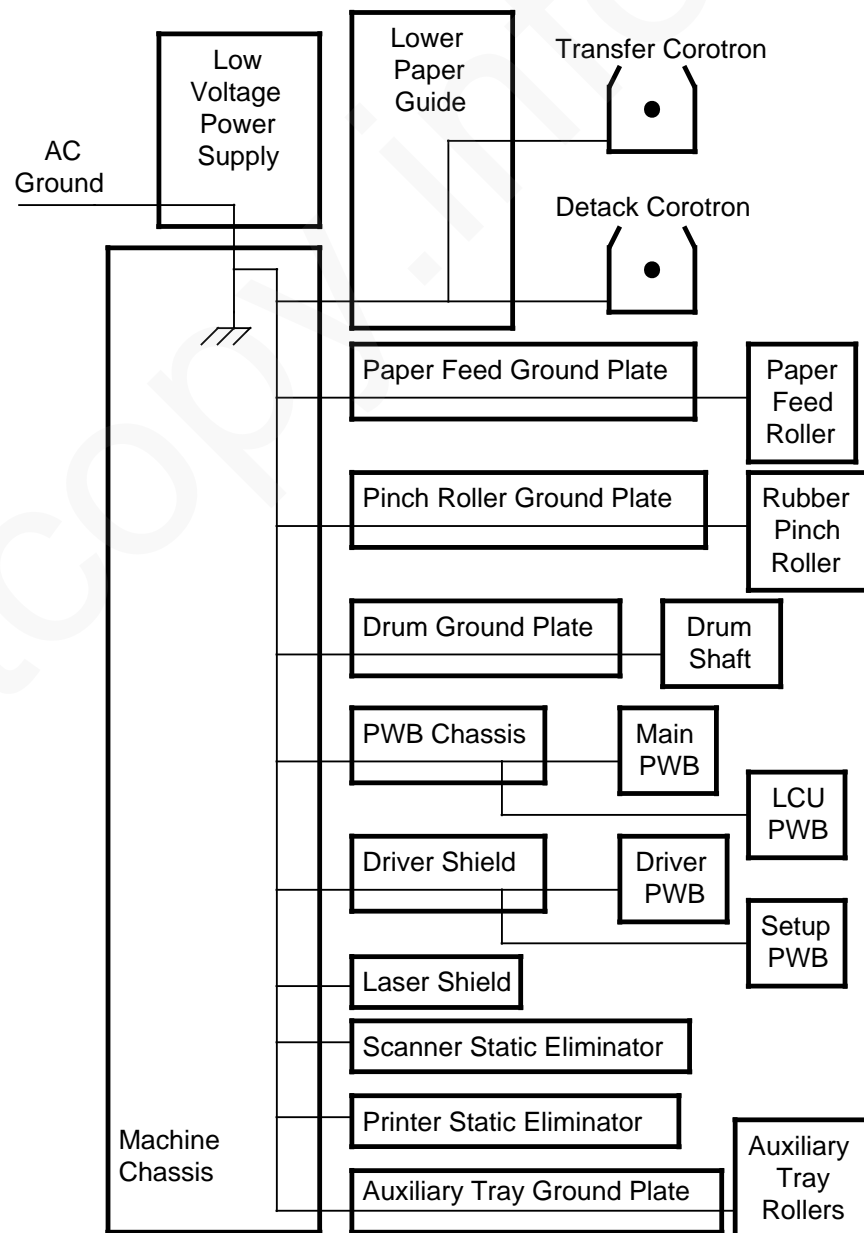


Figure 11. Chassis Ground Connections

## Connector/Pin Assignment (7042 & 7041 W/ Tag 42)

Abbreviations which may be used in the pin assignment lists are as follows:

<b>Both</b>	<b>Signal is bi-directional</b>
<b>HVPS</b>	<b>HV power supply</b>
<b>Inter</b>	<b>Interconnect PWB</b>
<b>LVPS</b>	<b>LV power supply</b>
<b>Main Inter</b>	<b>Main interconnect PWB</b>

A complete list of signal mnemonics and descriptions is included in section 6.

*NOTE: The note at the end of each list refers to the mating connector or item, alternate lists for the information, and to USO or RX only designations.*

### CN1 Driver PWB

Pin	From	To	Signal
1			PGND
2	HVPS	Driver	RES24
3	HVPS	Driver	FS1
4			PGND
5			PGND
6	HVPS	Driver	+24
7	HVPS	Driver	+24
8	HVPS	Driver	+18
9	HVPS	Driver	+9
10			SGND
11	HVPS	Driver	AINPCH
12	HVPS	Driver	AINBIAS
13	HVPS	Driver	AINCCH
14	Driver	HVPS	PCDRV
15	Driver	HVPS	BIDRV
16	Driver	HVPS	CCDRV

*NOTE: Connects to the HV power supply CN4.*

### CN1 HV Power Supply

Pin	From	To	Signal
1			SGND
2			SGND
3	LVPS	HVPS	+5
4	LVPS	HVPS	+5
5	HVPS	LVPS	HEON0
6	LVPS	HVPS	+24
7	LVPS	HVPS	+24
8			PGND
9			PGND
10	LVPS	HVPS	RES24

*NOTE: Connects to the LV power supply CN201*

### CN1 Interconnect PWB

Pin	From	To	Signal
1	Both	Both	BD0R
2	Both	Both	BD1R
3	Both	Both	BD2R
4	Both	Both	BD3R
5	Both	Both	SGND
6	Both	Both	BD4R
7	Both	Both	BD5R
8	Both	Both	BD6R
9	Inter	Main	BD7R
10			SGND
11			SGND
12	Main	Inter	BAO
13	Main	Inter	1KHZ
14	Main	Inter	IORR
15	Main	Inter	IOWW
16	Main	Inter	LCDER
17	Main	Inter	KEYCSR

### CN1 Interconnect PWB continued

Pin	From	To	Signal
18	Main	Inter	BOOK SW1
19			
20	Inter	Main	DOC STB
21	Inter	Main	DOC A4
22	Inter	Main	DOC B4
23	Inter	Main	COVER
24	Main	Inter	OA
25	Main	Inter	OA
26	Main	Inter	OA
27	Main	Inter	OA
28	Main	Inter	OB
29	Main	Inter	OB
30	Main	Inter	OB
31	Main	Inter	OB
32	Main	Inter	COMA
33	Main	Inter	COMA
34	Main	Inter	COMB
35	Main	Inter	COMB
36			AGND
37			
38			AGND
39	Main	Inter	SP
40	Main	Inter	PHA1
41	Main	Inter	LED24
42	Main	Inter	LED24
43			PGND
44			PGND
45	Main	Inter	+5
46	Main	Inter	+5
47			SGND
48			SGND
49	Main	Inter	-12
50	Inter	Main	VOUT

*NOTE: Connects to the main PWB CN2.*

**CN1 LCUPWB (RX only)**

Pin	From	To	Signal
1			
2			
3	Telephone	LCU	Tel1
4	Telephone	LCU	Tel2
5			
6			

NOTE: Connects to the telephone.

**CN1 Main PWB**

Pin	From	To	Signal

NOTE: Same as main interconnect PWB CN1.

**CN1 Main Interconnect PWB**

Pin	From	To	Signal
a1	Main Inter	Main	CRDY0
a2	Main Inter	Main	READY0
a3	Main	Main Inter	CMD
a4	Main Inter	Main	STS
a5	Main Inter	Main	POWER
a6			+5
a7			+5
a8			SGND
a9			SGND
a10			PGND
b1			SGND
b2			
b3	Main Inter	Main	VSU0
b4	Main Inter	Main	VCK0
b5	Main	Main Inter	VDA0
b6			
b7	Main	Main Inter	+5
b8	Main	Main Inter	+5
b9			SGND
b10	Main	Main Inter	RES24

NOTE: Connects to the main PWB CN1.

**CN1 Memory PWB**

Pin	From	To	Signal
a1	Main	Memory	A0
a2	Main	Memory	A1
a3	Main	Memory	A2
a4	Main	Memory	A3
a5	Main	Memory	A4
a6	Main	Memory	A5
a7	Main	Memory	A6
a8	Main	Memory	A7
a9	Main	Memory	A8
a10	Main	Memory	A9
a11	Main	Memory	A10
a12	Main	Memory	A11
a13	Main	Memory	A12
a14	Main	Memory	A13
a15	Main	Memory	A14
a16	Main	Memory	A15
a17	Main	Memory	A16
a18	Main	Memory	RAMST0
a19	Main	Memory	+5
a20	Main	Memory	+5
b1	Both	Both	D0
b2	Both	Both	D1
b3	Both	Both	D2
b4	Both	Both	D3
b5	Both	Both	D4
b6	Both	Both	D5
b7	Both	Both	D6
b8	Both	Both	D7
b9	Main	Memory	TCS00
b10	Main	Memory	TCS10
b11	Main	Memory	TCS20
b12	Main	Memory	TCS30
b13	Main	Memory	TCS40
b14	Main	Memory	BLA17
b15	Main	Memory	BLA18
b16	Main	Memory	WR0

**CN1 Memory PWB continued**

Pin	From	To	Signal
b17	Main	Memory	MOE0
b18	Main	Memory	RAMST1
b19			SGND
b20			SGND

NOTE: Connects to the main PWB CN4.

**CN1 Setup PWB**

Pin	From	To	Signal
1	Driver	Setup	+5
2	Driver	Setup	POWER
3	Both	Both	PD
4	Driver	Setup	PSCK0
5			SGND

NOTE: Connects to the driver PWB CN8.

**CN2 Driver PWB**

Pin	From	To	Signal
1	Driver	HVPS	HEON0
2	HVPS	Driver	+5
3	HVPS	Driver	+5
4			SGND
5			
6	Driver	HVPS	VDA0
7	HVPS	Driver	VCK0
8	HVPS	Driver	VSU0
9			
10			SGND
11			SGND
12	Driver	HVPS	CRDY0
13	Driver	HVPS	READY0
14	HVPS	Driver	CMD
15	Driver	HVPS	STS
16	Driver	HVPS	POWER

NOTE: Connects to the HV power supply CN5.

**CN2 Interconnect PWB**

Pin	From	To	Signal
1	Both	Both	BD0R
2	Both	Both	BD1R
3	Both	Both	BD2R
4	Both	Both	BD3R
5	Both	Both	BD4R
6	Both	Both	BD5R
7	Both	Both	BD6R
8	Both	Both	BD7R
9	Inter	Panel	BA0
10	Inter	Panel	1KHZ
11	Inter	Panel	IORR
12	Inter	Panel	IOWW
13	Inter	Panel	LCDER
14	Inter	Panel	KEYCS
15	Inter	Panel	+5
16	Inter	Panel	+5
17			SGND
18			SGND
19	Inter	Panel	BOOKSW
20			

NOTE: Connects to the control panel assembly.

**CN2 LCUPWB(USO/XCL/XLA)**

Pin	From	To	Signal
1			
2			
3	Line	LCU	L1
4	Line	LCU	L2
5			
6			

NOTE: Connects to the telephone line.

**CN2 LCUPWB (RX only)**

Pin	From	To	Signal
1			
2	Line	LCU	Tel1
3	Line	LCU	L1
4	Line	LCU	L2
5	Line	LCU	Tel2
6			

NOTE: Connects to the telephone line.

**CN2 Main PWB**

Pin	From	To	Signal
1	Main	LCU	TXA
2	Main	LCU	CML
3	LCU	Main	DHOOK0
4	Main	LCU	DIAL
5	Main	LCU	LD
6			
7	LCU	Main	RXA
8	LCU	Main	LOOP0
9	LCU	Main	CIS
10	LCU	Main	DIALT0
11	Main	LCU	RES24
12			PGND
13			
14	Main	LCU	+12
15	Main	LCU	OPHS
16			SGND
17	Main	LCU	-12
18			AGND
19			AGND
20	Main	LCU	+5

**NOTES**

- Connects to the LCU PWB CN5 on RX and CN6 on USO / XCL / XLA.
- USO / XCL / XLA: Pin 10 not connected. RX Pins 3 and 15 not connected. Some countries pin 10 not connected.

**CN2 Main Interconnect PWB**

Pin	From	To	Signal
1			SGND
2			SGND
3			SGND
4	HVPS	Main Inter	+5
5	HVPS	Main Inter	+5
6	HVPS	Main Inter	+5
7	HVPS	Main Inter	+5
8			
9	Main Inter	HVPS	VDA0
10	HVPS	Main Inter	VCK0
11	HVPS	Main Inter	VSU0
12			
13			SGND
14	HVPS	Main Inter	CRDY0
15	HVPS	Main Inter	READY0
16	Main Inter	HVPS	CMD
17	HVPS	Main Inter	STS
18	HVPS	Main Inter	POWER

NOTE: Connects to the HV power supply CN7.

**CN3 Driver PWB**

Pin	From	To	Signal
1	Driver	Cassette	+24
2	Driver	Cassette	+5
3	Driver	Cassette	PSCK0
4	Both	Both	PD
5			SGND
6			PGND
7	Driver	Cassette	POWER

NOTE: Connects to the auxiliary tray.



### CN3 Interconnect PWB

Pin	From	To	Signal
1	Inter	Scan	+5
2	Scan	Inter	DOCSTB
3			SGND
4	Inter	A4 sensor	+5
5	A4 sensor	Inter	DOCA4
6			SGND
7	Inter	B4 sensor	+5
8	B4 sensor	Inter	DOCB4
9			SGND

NOTE: Connects to the document sensors.

### CN3 LCU PWB (USO/XCL/XLA)

Pin	From	To	Signal
1	Handset	LCU	MIC+
2	Handset	LCU	MIC-
3	Handset	LCU	HOOK
4			
5			
6			SGND
7	LCU	Handset	SP+
8	LCU	Handset	SP-

NOTE: Connects to handset.

### CN3 LCU PWB (RX: GB, NZ, HK)

From	To
Pin 2	Pin 11
Pin 3	Pin 9
Pin 5	Pin 10

NOTE: Jumper wires required.

### CN3 LCU PWB (RX: All countries except GB, NZ, HK, SE)

From	To
Pin 3	Pin 11
Pin 4	Pin 10

NOTE: Jumper wires required. No CN3 required for SE.

### CN3 Main PWB

Pin	From	To	Signal

NOTE: Same as the interconnect PWB CN1.

### CN3 Main Interconnect PWB

Pin	From	To	Signal
1			PGND
2			PGND
3	HVPS	Main Inter	RES24

NOTE: Connects to the HV power supply CN8.

### CN4 Driver PWB

Pin	From	To	Signal
1	Driver	Developer	MG+
2	Developer	Driver	MG-
3	Driver	Developer	SPPLY5
4	Developer	Driver	ANLGTE
5			SGND

NOTE: Connects to the developer assembly.

### CN4 HV Power Supply

Pin	From	To	Signal

NOTE: Same as the Driver PWB CN1.

### CN4 Interconnect PWB

Pin	From	To	Signal
1	Interlock	Inter	COVER
2			SGND
3			

NOTE: Connects to the scanner interlock.

### CN4 LCU PWB (RX: All countries except GB, NZ, HK, IT, SE)

From	To
Pin 3	Pin 10
Pin 4	Pin 9

NOTE: Jumpers wires required.

### CN4 LCU PWB (RX: GB, NZ, HK)

From	To
Pin 2	Pin 10
Pin 3	Pin 7
Pin 5	Pin 9

NOTE: Jumpers wires required.

### CN4 LCU PWB (RX: IT, SE)

From	To
Pin 2	Pin 11
Pin 3	Pin 10
Pin 4	Pin 9
Pin 5	Pin 8

NOTE: Jumpers wires required.

### CN4 MAIN PWB

Pin	From	To	Signal

NOTE: Same as the memory PWB CN1.

### CN5 Main PWB

Pin	From	To	Signal
1	Main	Speaker	SP
2			AGND

NOTE: Connects to the speaker.

### CN5 Driver PWB

Pin	From	To	Signal
1	Sensor	Driver	ANLGPE
2			SGND

NOTE: Connects to the cassette paper sensor.

### CN5 HV Power Supply

Pin	From	To	Signal

NOTE: Same as the driver PWB CN2.

### CN5 Interconnect PWB

Pin	From	To	Signal
1	Inter	Motor	OA
2	Inter	Motor	OA
3	Inter	Motor	OB
4	Inter	Motor	OB
5	Inter	Motor	COMA
6	Inter	Motor	COMB

NOTE: Connects to the scan motor.

### CN5 LCUPWB(USO/XCL)

From	To
Pin 3	Pin 10
Pin 4	Pin 9

NOTE: Jumper wires required.

### CN5 LCUPWB(XLA)

From	To

NOTE: Jumper wires TBD.

### CN5 LCUPWB(RX-DE only)

From	To
Pin 1 *	Pin 7 *
Pin 2	Pin 11
Pin 3	Pin 10
Pin 4	Pin 9
Pin 5	Pin 8

NOTE: Pin 1 \* to pin 7 \* jumper required to enable ground start.

### CN6 HV Power Supply

Pin	From	To	Signal
1	HVPS	Control	BIVR1
2	Control	HVPS	BIVR2

NOTE: Connects to the density control.

### CN6 Interconnect PWB

Pin	From	To	Signal
1	Video	Inter	VOUT
2			AGND
3	Inter	Video	+5
4	Inter	Video	-12
5			AGND
6	Inter	Video	SP
7			AGND
8	Inter	Video	PHA/1
9			PGND
10	Inter	Video	LED24

NOTE: Connects to the video CIS.

### CN6 LCUPWB(USO/XCL/XLA)

Pin	From	To	Signal

NOTE: Same as main PWB CN2.

### CN7 Driver PWB

Pin	From	To	Signal
1			SGND
2	Driver	Driver	+5
3	Driver	Driver	FDCRO
4	Driver	Driver	FDCR1
5			
6	Driver	Driver	CFON1
7	Driver	Driver	FDB1
8	Driver	Driver	FDA1
9	Driver	Driver	+24
10	Driver	Driver	+24
11			PGND
12			PGND
13			PGND

NOTE: Connects to the driver PWB CN22.

### CN7 HV Power Supply

Pin	From	To	Signal

NOTE: Same as main interconnect PWB CN2.

### CN8 Driver PWB

Pin	From	To	Signal

NOTE: Same as setup PWB CN1.

## CN8 HV Power Supply

Pin	From	To	Signal

NOTE: Same as main interconnect PWB CN3.

## CN9 Driver PWB

Pin	From	To	Signal
1	Driver	Counter	+5
2	Driver	Counter	DRCS
3	Driver	Counter	DRSCK
4	Driver	Counter	DRD1
5	Counter	Driver	DRD0
6			SGND

NOTE: Connects to the drum counter.

## CN9 HV Power Supply

Pin	From	To	Signal
1	Sensor	HVPS	FS1D
2			SGND
3	Sensor	HVPS	FS1

NOTE: Connects to the paper sensor.

## CN10 Driver PWB

Pin	From	To	Signal
1	Laser	Driver	POSYN0
2			PGND
3	Driver	Laser	POD0
4	Driver	Laser	+24
5	Driver	Laser	+9
6			SGND
7	Laser	Driver	UFE0
8	Driver	Laser	LD0
9	Driver	Laser	LSPWRC
10	Laser	Driver	ANLGLM
11	Driver	Laser	+24
12	Laser	Driver	DCLED

NOTE: Connects to the laser.

## CN11 Driver PWB

Pin	From	To	Signal
1	Driver	Fuser	+5
2	Fuser	Driver	AINTH

NOTE: Connects to the fuser assembly.

## CN12 Driver PWB

Pin	From	To	Signal
1	Sensor	Driver	FS2
2			SGND

NOTE: Connects to the paper output sensor.

## CN13 Driver PWB

Pin	From	To	Signal
1	Driver	Fan	FDON
2	Fan	Driver	AINFN

NOTE: Connects to the fan.

## CN20 Driver PWB

Pin	From	To	Signal
1	Driver	Solenoid	+24
2	Solenoid	Driver	CFON0

NOTE: Connects to the feed solenoid.

## CN22 Driver PWB

Pin	From	To	Signal

NOTE: Same as driver PWB CN7.

## CN23 Driver PWB

Pin	From	To	Signal
1	Driver	Motor	PHA
2	Driver	Motor	PHC
3	Driver	Motor	PHB
4	Driver	Motor	PHD

NOTE: Connects to the print motor.

## CN101 LV Power Supply

Pin	From	To	Signal
1	LVPS	Fuser	AC
2	LVPS	Fuser	AC

NOTE: Connects to the fuser assembly.

## CN201 LV Power Supply

Pin	From	To	Signal

NOTE: Same as HV power supply CN1.